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President's Address

SOME THOUGHTS ON MEDICAL EDUCATION

BY

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Let me begin my address to you to-night by expressing again my thanks to the representatives of the British Medical Association for electing me to the Presidency—and you will permit me to add my appreciation of the warm and confident friendship of my colleagues in Northern Ireland who nominated me for this high office.

Our Association is not a mere trade union for collective bargaining. It is taking upon itself, it is having forced upon it, important public functions. It has advised on the formulation of policy and has assisted the plans of administrators. In this age of public health service it speaks with the authority of the medical profession behind it and is an important factor in affairs. While it has always maintained the honour and the interests of the medical profession, a review of its policy shows that it has never in that interest betrayed the community.

The Presidency of such an Association is no mean honour, and it is an honour enhanced by the distinction of those who have held the office before me. I have no intention of inflicting upon you a bead-roll of my predecessors, but it is my pious duty to commemorate the Presidents at your two previous meetings in Belfast. I do so with the more pleasure as both of them were my teachers, and of one I was for many years a colleague.

Presidents at Belfast in Earlier Days

When the Association first met here in 1884 Professor James Cuming was President. He was a physician of a type perhaps more common in those days than in these, a type which owed to the humanities and to medicine at least an equal allegiance. As an undergraduate one felt that a knowledge of Horace was possibly a better passport to his good graces than an acquaintance even with Fagge and Pye-Smith. His wide knowledge both of men and of medicine, his fundamental common sense, and not least his commanding presence made him a court of appeal as a consultant, and his judgements were delivered in measured phrase, in logical sequence, not seldom with ironic humour. In therapeutics he was not merely a sceptic—I speak now of his later years—he was an iconoclast. There is a story, probably apocryphal, that after a consultation he discussed at great length the diagnosis with the patient's doctor, who finally grew restive and said, "But what treatment am I to give him?" Cuming lifted a Burroughs Wellcome price list from his desk, handed it gravely to the inquirer, and said in his most impressive tones, "Begin at A and work through that."

In 1909 Sir William Whitla sat in the President's chair—also a physician, but with a difference. One evening he described to me at some length how he had almost persuaded the reader of his publishing firm that the split infinitive, as he used it, was an enhancement of English. In his own subject of materia medica and therapeutics he was a recognized authority. But his chief claim on the gratitude of his fellows was that he was a pioneer in a path of medical literature on which he has since had many followers. His *Dictionary of Treatment* came as a boon to many a harassed practitioner who had reached the end of his therapeutic resources. It was an immediate success, and retained its popularity through successive editions. It gained the distinction of translation into more than one foreign language, and one of Sir William's cherished possessions was a beautifully bound version in Chinese.

To his own profession Sir William was most generous. Besides his private kindnesses to his brethren in need he built and presented to the Ulster Medical Society as its permanent home the Medical, since his death the Whitla Medical, Institute. At its opening he told us that he had built it out of the profits on his *Dictionary of Treatment*.

His benefactions did not end with his life. He had been one of those who in the face of much opposition advocated the establishment of Queen's University. He had served it as Professor, as Senator, as Pro-Chancellor, and as member of the Imperial Parliament. When he died he left to the University his house and grounds as a residence for the Vice-Chancellor, together with a large share of his considerable fortune. The money has been earmarked for building, and when the Association next visits Belfast my successor will deliver his address in the Whitla Hall of the University.

Interest in Medical Education

The subject on which I have chosen to address you is that of medical education—partly because I am much interested in it myself as a teacher of graduate and undergraduate students of medicine ever since I got my qualification; partly because, if one may judge by the numerous criticisms of our present system of education I have read, my interest is shared by many others; and lastly, because medical education should be a matter of vital concern to

every practitioner and to every member of the B.M.A. Our profession cannot afford to recruit at a C3 standard. In this health-conscious age of ours public authorities are constantly launching one health scheme after another. As experts we ask for our collective advice to be taken and for our collective services to be employed. But the adminstrator has the last word, and while the specialist or the whole-time officer is practically immune from criticism, the incompetence or the carelessness of a few can be alleged as a reason for excluding the whole class of general practitioners from participation in a service. We are asking for our rights; but rights involve responsibilities, and if we are to enjoy the one we must be prepared to the last man to discharge the other.

I need not remind members of this Association of the many practical ways in which it shows its interest in medical education, "both postgraduate and undergraduate."

The critic of the medical curriculum assumes generally that we teachers at the end of five years should turn out a finished product, and goes on to blame us because we do not produce a finished general practitioner. No one expects us to turn out at the end of the five years a finished surgeon or anatomist or pathologist. Everyone recognizes that to form a specialist years of postgraduate study and experience are required. Are we to take it that the path which the general practitioner must follow to reach the mastery of his art is shorter and less steep than that trodden by the specialist? I should say "No." The specialist must know almost everything about his subject; the general practitioner must know something about almost every subject. He must learn to make his diagnoses without the skilled help which the specialist commands, and to carry out his treatment with makeshift appliances and with amateur nursing. He must acquire sufficient diplomacy to deal with unreasonable patients, with suspicious relatives, with inquisitive neighbours. He must keep in touch with the demands of public authorities and of public services. His responsibilities are if anything greater than those of the specialist, for he is the court of first instance, and on his decision the life of a patient may depend. His word may put a man in the dock or may even send him to the gallows.

Just as the finished surgeon must have had responsible experience of surgery, the finished general practitioner must have had responsible experience of general practice. The undergraduate's horizon is limited by the threatening figures of a court of examiners. Only when that grim spectre has faded is he free to take a view of the responsibilities which he must shoulder throughout the rest of his professional life—responsibility to his patients, to his own reputation, and, most important of all, to his own private conscience. The better trained the young graduate, the more quickly and the more competently does he take up the burden.

I may very pertinently be asked how, if practice is essential to form a good practitioner, can licensing bodies be justified in giving a licence to practise to those who have not had this experience. I can only reply that after many years as an examiner and as an inspector of final examinations I am satisfied that the dominant question in the mind of every examiner is "Is it safe to the public to allow this candidate to practise?" and that only when that question can be answered in the affirmative is he permitted to pass.

Clinical Study and the Undergraduate

As the practice of clinical medicine is the most important factor in forming the young practitioner and is to be his chief pursuit in after-life it is but natural that would-be reformers of the curriculum should demand that yet more clinical study should find a place in the education of the undergraduate. I should be the last to disagree, but do not let us be led into the fallacy of thinking that clinical training is the be-all and end-all of medical education.

A probationer nurse and a medical student have each approximately three years of clinical experience. The nurse's opportunities for clinical observation are infinitely better than those of the student. She probably sees at least as many patients, and she does not merely see them during a ward visit. She lives with them hour after hour and day after day, watches the course of their disease, notes its changing phases, and the effect of the methods of treatment that have been employed. She assists at consultations, and has the benefit of listening to clinical lectures. And she makes full use of her opportunities. Every one of us must acknowledge with gratitude the debt that we owe to the trained nurse for her help in diagnosis, in prognosis, and in treatment. But does her unrivalled clinical experience qualify her to take on the function of a medical practitioner? She would herself be the first to say "No." She lacks the background, the background of human anatomy and physiology and pathology, of knowledge of the human body in health and in disease, which the medical student has gained with much toil and sweat and against which his clinical observations are composed and the picture interpreted. It is the main business of a medical education to provide an adequate background and to teach how it should be used, and the more competently that work has been done the more valuable will his clinical experience be to the practitioner.

Importance of Practical Anatomy

I have put human anatomy in the first place as a necessary preliminary to clinical study. Teachers of anatomy are usually the most popular of professors among medical students, so it is only poetic justice that their teaching should be a favourite point for attack by the critics. And perhaps the commonest criticism is that such an unconscionable time is wasted by the student in the dissecting-room.

Is his time really wasted? The successful clinician takes little upon trust, and so far as is possible checks all his facts by his own personal observations. But in almost all the sciences which the medical student must study he is compelled to take most of his facts on trust. Practical classes permit him to verify a few of them, but he has neither the time nor the technical skill to go further. When he takes up practical anatomy he is not merely permitted and encouraged, he is required by his own personal observation to verify the statements of his teacher and of his textbook. This is an invaluable discipline, even if a knowledge of anatomy were of little use in practice. But anatomy is the large-scale map of the human body, and we have it on the authority of one who was both a scientist and a statesman that if we wish to get an understanding of peoples and of events it is essential to study large-scale maps.

Lectures and Lecturers

If the anatomist is Public Enemy Number One of the medical student, Number Two is undoubtedly in the eyes of the critics the lecturer. We who lecture might conjugate the verb something like this, "We are dull, you are falling asleep, they think we should be painlessly exterminated." The pity of it is that the critics are to some extent in the right. There are dreary lectures and dull lecturers, and that is a pity, for after one has

listened to a master of the art one is left in no doubt as to the superiority of the spoken word above the printed page in rousing interest in a subject and in presenting it in the round.

Teaching and lecturing are arts that can be learned, and nowadays a training in them forms part of the preparation of all primary and of many secondary school teachers. Would it not be possible that an institution such as the Postgraduate Medical School should give a course in lecturing, and that those who have designs on the teaching posts in our medical schools should be encouraged to take it out?

I do not propose to take up your time with further discussion in detail of the medical curriculum and of its critics. Doubtless it could be improved, but, so far as I have been able to find out, our medical students get a training certainly not inferior to that given in any other civilized country. Of course the curriculum is overcrowded, but fortunately the brain of the undergraduate is elastic and has a well-developed protective mechanism of forgetfulness, not likely to atrophy through disuse.

The Young Physician

However much or little the young graduate has retained of the many sciences he has become acquainted with, he has had a training in observation, in the use of his critical and his reasoning faculties, and in dealing with men, women, and examiners. He has the key to the vast storehouse of knowledge contained in medical literature, for he is familiar with its idiom. He now enters on the most important stage of his lifelong medical education. He now becomes his own teacher and taskmaster. He has had to learn to think like other people, he must now think for himself. Only thus can he transmute the ore of scientific knowledge into the gold of clinical wisdom.

In all but a few instances the neophyte begins his career under the tutelage of one of his seniors, either a member of a hospital staff or a general practitioner, and that senior has a great responsibility, for by precept and still more by example he may make or mar a promising practitioner. Both in this stage and later, when he has at last hoisted his own flag, the young physician need not want for aids in self-education. Nothing is more helpful than a circle of medical friends who are not ashamed to talk shop. Of much the same kind of value is the consultant who is willing to discuss cases at length. Lectures in a class-room may be indigestible fare for the undergraduate; delivered in a medical society they seldom fail to provide food for thought for the graduate student. His journals may be relied on to add to and to correct his store of knowledge.

Postgraduate Training

We have long had the postgraduate course for the few, but the National Health Insurance Act has now made it available for the many. If I might be permitted to criticize I think that most postgraduate courses try to administer to their medical patients what used to be called a "blunderbuss prescription," and that too much is attempted in too short a time. But these courses are still in their infancy. Some day we may see the general practitioner going back to his old school or to another school for a month, for three months, even for a sabbatical year, both to learn and to teach. And he will come back to his patients as he does from our present courses, not merely with his skill enhanced, but, what is perhaps more important, with his interests freshened and his enthusiasm rekindled.

There are possibilities of postgraduate training in the linking up of practitioners with hospitals, as Sir Farquhar Buzzard suggested last year. Leaving aside the difficult question of interference by one practitioner with the patients of another, there are many adminstrative problems to be overcome. With good will on both sides these should not be insoluble; but it will, I am afraid, be a long time before administrators can be brought to believe that a panel of doctors is just as efficient and reliable as, and gives no more trouble than, a whole-time officer.

Perhaps in the future all difficulties will be solved by the establishment of a State medical service. Like good democrats we shall always oppose it. But every fresh instalment of social and of public health legislation, every new chapter opened in the volume of State control, brings us steadily nearer to the totalitarian ideal, and when that has finally arrived I suppose we may say good-bye to the general practitioner as we know him.

The G.P. Past and Present

But he is still with us, and I ask myself, How does he compare with his predecessor of a generation back? His equipment is undoubtedly better, he has for the service of his patients a store of knowledge and an acquaintance with technical resources not even dreamt of when I was a medical student. But I take down a volume written more than forty years ago by one who had been a patient of many doctors, and when I read his judgement on our profession I realize that in the eyes of the patient—a critic who must not be lost sight of—qualities are at least as important as technical accomplishments. Let me quote a part of that judgement to you:

> "There are men and classes of men that stand above the common herd; the physician almost as a rule. Generosity he has such as is possible to those who practise an art, never to those who drive a trade; discretion, tested by a hundred secrets; tact, tried in a thousand embarrassments; and what are more important, Heraclean cheerfulness and courage. So it is that he brings air and cheer into the sick-room, and often enough, though not as often as he wishes, brings healing."

One is proud to belong to the profession which merited such a tribute from Stevenson, for he was anything but a fool; but how little he says of the skill and of the training on which we set such store, and how much of virtues and of qualities unmentioned in any curriculum, and which no teacher whom I have ever met would undertake to impart. Does our scheme of education do nothing to foster them?

Medical practice and medical education has its repellent side, often sordid and sometimes disgusting. I do not think that many youngsters take up the drudgery of medicine unless they have as part at least of their motive a lively interest in humanity and some sympathy with human suffering. A hospital is the best of soils to foster such good qualities and to encourage them to develop into the most admirable of medical virtues. Close contact with men and women, the constant witness of their fortitude, their patience, their unselfishness in the face of pain, of disability, of death itself, is a more impressive lesson than the skeleton at the Egyptian feast, and only the most careless or the most callous can fail to benefit by it. Attendance in the wards and in the out-patient rooms, still more a residence in hospital, long a feature in Irish medical schools and soon to be introduced in the United Kingdom generally, is an education in behaviour no less than in clinical medicine. It is the better school for that,

as patients in British hospitals are treated as men and women with feelings which can be hurt and a personal dignity which can be outraged.

Conclusion

But I must bring to a close these disjointed remarks on medical education. I have no anxieties about our students. Their standard is as high as it ever was, and they are getting and taking an excellent training. To the seniors, of whom I am one, the two-edged compliment may be paid that it is impossible to improve us. But I do feel uneasy about the most important class in the profession, the young general practitioner in the twenties and the early thirties. Is panel practice giving him an assured income too soon? Is it taking away the incentive to study and to improve the standard of his practice? Is he sitting down at ease in Zion? I trust not, for it is upon him that we depend to maintain and to raise the prestige of our profession.

ELONGATION AND DILATATION OF THE COLON*

BY

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An approach to any problem of colonic disease must inevitably take into consideration the embryological origin of the large bowel, its adult anatomy, and its physiological duality.

Development

The colon is developed from two sources: (1) the midgut, supplied by the superior mesenteric artery; and (2) the hindgut, supplied by the inferior mesenteric artery, the juncture in the adult being about the middle of the transverse colon. Until the end of the first month the future small and large intestines are approximately of the same length, and the colonic rudiment is actually narrower than that of the small intestine. The second month sees the beginning of the rapid elongation of the primitive small bowel, but it is not until the fifth month that the calibre of the colonic rudiment begins to enlarge. The alimentary tube, originally straight, is rearranged after the second month by the rotation of the primitive bowel about the superior mesenteric artery; when this stage is completed the future caecum comes to lie anterior to the right kidney, the future splenic flexure has attained its adult position, and the future descending colon has been forced from its median position into the left flank by the rapid elongation of the small bowel. From this time until just after birth, when the adult anatomical arrangement is reached, there occur two processes which appear to be correlated with man's upright position: (1) descent of the caecum to the right iliac fossa as a result of elongation of the proximal part of the primitive colon, and (2) the disappearance of the dorsal mesentery from certain segments of the colon.

Normal Anatomy

To the complete peritoneal coat of the caecum may be added a short mesentery; the ascending colon is uncovered by peritoneum posteriorly. The transverse colon has a mesentery of varying length, which confers corresponding mobility on this segment. The descending colon lacks a mesentery, and the iliac colon up to the brim of the true pelvis is fixed to the parietes, whereas the pelvic colon forms a long free loop with a fan-shaped mesentery which allows a wide range of movement, the loop being four to ten times as long as the root of the mesentery.

Developmental Anomalies

It is not a surprising matter that a tube having such a complicated development should be a site of anatomical anomalies. Thus Treves found a mesentery to the descending colon in 36 per cent. of 100 cases, and to the ascending colon in 26 per cent. According to Dott's (1923) classification, anomalous development which might lead to elongation of the colon may be due to excessive growth in length of a segment, to deficient fixation of a segment to the abdominal wall, or to deficient fixation of the common mesentery of the terminal ileum and caecum, so that the caecum, or an ileo-colic segment, possesses a wide range of mobility. To this list may be added the plication of a segment of the tube which occurs when its mesentery is congenitally short, although the tube itself is of normal length or even elongated (Bernard and de Tayrac, 1935).

The Nerve Supply of the Colon

As a part of the alimentary canal the colon is innervated by both sympathetic and parasympathetic fibres. The "midgut" colon (caecum, ascending colon, and right half of transverse colon) derives its nerves from the plexus accompanying the colonic branches of the superior mesenteric artery; this is made up of contributions from the semilunar ganglia (sympathetic, from the thoracic splanchnic nerves) and from the right vagus nerve (parasympathetic). The "hindgut" colon (left half of transverse colon, descending and pelvic colon, and rectum) is innervated by nerves accompanying the inferior mesenteric artery, which are derived from the pelvic splanchnic nerves (sympathetic), and by branches arising from the hypogastric plexuses (parasympathetic, from the second, third, and fourth sacral nerves). The latter nerves pursue an independent course unrelated to the vessels, and have been traced (Mitchell, 1935) as far as the splenic flexure. Thus the proximal part of the colon is influenced by the cranial parasympathetic outflow (right vagus nerve), whereas the distal part is influenced by the sacral parasympathetic outflow. It has been shown (Learmonth and Markowitz, 1930) that stimulation of the sympathetic nerves is followed by inhibition of colonic activity. The parasympathetic nerves are motor to the distal colon.

The sphincter apparatus at the anus has two components: an internal sphincter, of unstriped muscle, which in man contracts on stimulation of the pelvic splanchnic (sympathetic) nerves (Rankin and Learmonth, 1930), and an external sphincter, of striped muscle, supplied by the (somatic) pudic nerves.

Physiology of Defaecation

Little need be added to the concise description of the mechanism of defaecation given in the admirable paper by Garry (1934), which I quote: "As in lower animals, eating food increases the activity of the human colon and frequently initiates a mass peristalic action leading to defaecation. This response was first noted by Macewen in patients with caecal fistulae. Subsequently the name gastro-colic reflex was applied by Hurst and by Hurst and Newton. . . . For our knowledge of the movements of the large bowel in *man* we are deeply indebted to Hurst. . . . Three or four times a day a massive peris-

* Read in opening a discussion in the Section of Diseases of Children at the Annual Meeting of the British Medical Association, Belfast, 1937.

taltic wave drives the contents of the proximal colon bodily into the distal colon. Before and during the movement the haustral segmentation disappears. Holzknecht was the first to detect this mass movement in the human colon. In man the rectum is normally empty and faecal matter accumulates proximal to the pelvi-rectal flexure. As a result of one of the infrequent massive peristaltic waves faecal matter enters the rectum and the call to defaecation becomes clamant. In the act of defaecation itself strong peristaltic contractions occur throughout caecum and colon, the intra-abdominal pressure is raised by contraction of the diaphram and of the abdominal muscles, and the faeces are forced through the relaxed sphincters of the anal canal." The stimulus for the act of defaecation is distension of the rectum (Hurst, 1934; Denny-Brown and Robertson, 1935).

Possible Mechanical Results of Variations in Arrangement of the Colon

These may be considered under two headings:

1. *In the Caecum.*—It has been stated that when the caecum is unduly long and perhaps continued into an ascending colon possessing a mesentery, it lies constantly in the pelvis, and the absence of direct attachment to the abdominal wall deprives this part of the tube of a "hold," so that its contractions are less effective and its contents tend to stagnate. Formidable lists of symptoms have been attributed to caecal and colonic stasis produced in this way. At least in the adult, general and abdominal symptoms are not inevitably associated with mobility of the caecum; and attempts to provide an anchorage for it by operation have been almost entirely given up.

2. *In the Transverse and Sigmoid Colon.*—In these situations there are two theoretical possibilities: (*a*) that mobility conferred by an unusually long mesentery may lead to kinking of the gut or to volvulus; (*b*) that an elongated segment of colon possessing a mesentery of normal length would tend to be plicated and kinked (Bernard and de Tayrac, 1935).

Both these conditions are said to occur in the sigmoid of infants, which is stated by some observers to be relatively longer than in the adult. It is quite clear that, at least in later life, the colon may deviate widely from the normal arrangement (if there is such) without the appearance of abdominal symptons.

The rational view seems to me to be that the prolonged accumulation of gas and faeces in an elongated or mobile colon may lead to kinking, but that the cause of the accumulation is not the anatomical disposition of the colon itself.

Clinical Considerations

I am greatly indebted to Dr. William Brown, senior physician to the Royal Hospital for Sick Children, Aberdeen, for allowing me to utilize his clinical material. Members of the Section will be able to add their own experience; but I have found that the cases fall into certain groups:

1. Constipated children in whom the radiological examination discloses an anatomically and physiologically normal colon: the colon is normal in length and in mobility, and its contents are evacuated normally.

2. Constipated children in whom the radiological examination reveals an anatomical anomaly—for example, undescended caecum, mobile ileo-colic segment—and in whom satisfactory function can be produced and maintained by simple training and simple therapeutic measures.

3. Constipated children who suffer from periodic diarrhoea from the retention of faeces, and in whom the radiological examination after barium enema shows a distended colon, which the child can successfully evacuate after the bowel has been thoroughly emptied and trained.

4. Constipated children in whom the radiological examination after barium enema appears to show kinks either in the mobile parts of the colon or at a flexure, usually the splenic flexure. After simple treatment and training the constipation may be remedied, although the "kinked" appearance after a barium enema persists.

5. Constipated children in whom a barium enema outlines an elongated loop of colon, usually the pelvic colon, this appearance persisting after regular and satisfactory evacuations have been secured by appropriate treatment.

6. Constipated children in whom the barium enema discloses an elongated and distended colon; treatment may or may not result in satisfactory evacuation (megacolon). (Perhaps it is superfluous to remind members that the barium enema is a measure of the distensibility of the colon, and not necessarily of its tone. This important point has been emphasized by Hurst, who very rightly insists that the physiological efficiency of the large bowel can be assessed more accurately after a barium meal.)

From consideration of this clinical grouping it is quite clear that anatomical abnormalities of the colon do not inevitably cause constipation, and the success of a simple regime in cases showing elongation and/or dilatation seems to me to provide weighty evidence against the possibility of such anatomical conditions ever directly causing constipation. This view is supported by the observations of Khalik, Erfan, and Askar (1932), who found that anatomical variations in the length and calibre of the colon were common in infants who did not suffer from constipation. In the presence of faecal stasis it is conceivable that the possession of a long colon may increase and tend to perpetuate the condition by so altering the alignment of the large bowel that the *massive onward movement of its contents* preliminary to defaecation is impeded.

Treatment.—If I exclude cases of megacolon, which I shall deal with separately, it seems to me that certain general deductions can be made as to treatment. In the absence of evidence that anatomical peculiarity has any repercussion on colonic function, I would lay down the rule that surgical intervention in such cases is not indicated. It is true that successful cases of partial colectomy have been published, and that from time to time sympathetic neurectomy has been utilized in so-called intractable cases of constipation. I would like to make it clear that I do not now believe that neurological operations are ever indicated in constipation (apart from megacolon), whether the patient is a child or an adult. The severity of colectomy (even in young children) has been greatly reduced by the use of modern methods; but "successful" cases, to my mind, do not prove the efficacy of the treatment, but merely that a shortened colon can function adequately—which is a surgical commonplace.

Megacolon

"Megacolon can be defined as dilatation and hypertrophy of a part of the colon or of the whole colon, occurring in the absence of a gross obstructive lesion" (Adamson and Aird, 1932). It is a rare disease. [4 in 131,000 cases in a general hospital (Walton, 1930); 1 in 2,620 cases in a children's hospital (Hurst, 1934).]

The present view is that the enormous hypertrophy and dilatation so characteristic of the disease are the result of neuro-muscular dysfunction, and are congenital. The nature of this dysfunction is still problematical. The local changes in Auerbach's plexus described by Cameron may well, as Adamson and Aird (1932) point out, be secondary to other pathological changes in the wall of the bowel. The occasional association of dilatation of the bladder and/or ureters with megacolon focuses attention on their common nerve supply—pelvic splanchnic sympathetic

nerves and sacral parasympathetic nerves; it must be realized that over-activity of the one or under-activity of the other might produce the same result; and, indeed, Adamson and Aird have produced the condition in animals by dividing the parasympathetic nerves to the distal colon. Of neurogenic hypotheses mention may be made of spasm of the internal sphincter (Fenwick), achalasia of the sphincter ani (Hurst), and incoordination of the musculature of the colon, so that it does not relax before a peristaltic wave (Hawkins).

My own view is that the colon does not behave as if a terminal obstruction were present, for in such cases surgeons are accustomed to depend on early distension of the caecum as a constant diagnostic sign, and this is inconstant in megacolon. Adamson and Aird (1932) put the incidence of the disease as pelvic colon alone 37 per cent., with dilatation of the upper part or the whole of the rectum in 34 per cent. of cases. In only 25 per cent. does the dilatation extend to the ileo-colic valve, and in the remainder the descending, transverse, and ascending colon are involved with decreasing frequency. Radiological observations on the barium-filled colon show that it is active, although its activity is without result and may even give the impression of being purposeless.

My opinion at the moment is that the whole picture points to the presence of local segmental neuro-muscular incoordination when the disease does not involve the rectum, and that when the rectum is dilated there is added achalasia of the sphincter ani internus.

Treatment.—It has been shown by Morton and Scott (1930) that after spinal anaesthesia the colon may be able to evacuate its contents. As this procedure paralyses parasympathetic as well as sympathetic nerves one must conclude that the intrinsic neuro-muscular mechanism is adequate in such cases. In less severe types, preliminary enemata, training of the bowel, and the administration of liquid paraffin are usually adequate if the patient (and the parents) are intelligent and co-operative; when the rectum is involved, graduated dilatation of the internal sphincter, as suggested by Hurst, may also be usefully employed. When such simple measures are not effective the operation of sympathectomy may be considered, with the purpose of depriving the distal colon of its inhibitory nerves. Of the many technical procedures suggested, by far the most eclectic is that devised by Telford and Stopford (1934), and I consider that it should be employed exclusively. It consists in the resection of the mesially directed branches of the lumbar ganglia from the second to the fourth inclusive, and avoids the paralysis of the vasoconstrictor nerves to the legs which follows the (equally efficacious) removal of the lumbar cords, and the sterility which follows resection of the presacral nerve in male patients.

The results of sympathectomy are distinctly good; in the series collected by Ross (1935), twenty-one out of twenty-nine patients were benefited, and many other surgeons have reported successes. My own experience is similar. The mechanism of the improvement is obscure. Any explanation must take into account the often dramatic immediate improvement in function, which disposes of valves, kinks, or elongations as the essential cause of the failure of evacuation of the colon. Indeed (and this emphasizes the point made by Hurst), there is often little change in the appearance of the colon after a barium enema, though its function is satisfactory. I do not think one can go further than to say that the distal colon, under the unbalanced dominance of its extrinsic motor nerves, regains its physiological adequacy. It is interesting to note that when the urinary tract is dilated it shares in the improvement following sympathetic neurectomy (Adamson and Aird, personal experience).

Conclusion

In conclusion I advance as a basis for this discussion the view that elongation and dilatation of the colon are not primary causes of dysfunction of the colon, but incidental findings; and that their surgical correction should never be attempted. The condition of megacolon is an exception, in which the dilatation and elongation are part of the disease. It may be possible to persuade a megacolon to function adequately by medical treatment; if this fails, sympathetic neurectomy is likely to be successful.

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PULP-SPACE INFECTION

BY

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In the past attention has been drawn to the treatment of septic fingers and hands, notably by the works of Kanavel, Fifield, and Eckhoff. In attempting to follow their teaching I have collected the details of 183 cases of sepsis in the hand, among which were fifty-one of pulp-space infection. An account of my practice and treatment, with results and analysis of these cases, is here given.

Anatomy

In order to appreciate the difficulties met with in the treatment of pulp-space infection it is necessary to review certain fundamental anatomical points. The skin on the volar aspect of the finger is bound down to the periosteum on the front of the terminal phalanx by the dense fibrous tissue strands. The pulp is composed of fat, and is divided by the dense connective tissue framework into a series of loculi. Sweat and sebaceous glands lie in the fat, their ducts passing outwards to the epidermis.

Infection in many cases can be traced to a breach in the continuity of the skin, and is confined to one or a number of loculi in direct relation to the nidus of infection. An infection of these loculi tends to be directed backwards towards the periosteum of the terminal phalanx. Generalized involvement of the pulp is checked until the later stages by the fibrous walls. Inflammatory swelling, held within the limits of firm-walled loculi, is associated with greatly increased tension in the pulp, causing pressure, with diminished blood supply to the pulp and bone.

Classification

There are five main types of pulp-space infection, the classification depending on the time at which they are

seen and the site of infection. These cases may be grouped as terminal, lateral, and central infections. The central cases comprise those which are early and just

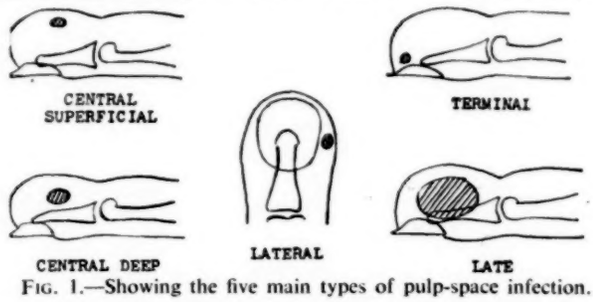

FIG. 1.—Showing the five main types of pulp-space infection.

beneath the skin and those which are late and the infection has passed deeply into the pulp. With neglect or inadequate treatment cases are seen in which the whole pulp has undergone disorganization; in many the terminal phalanx is dead, in part or the whole.

The series of fifty-one cases is grouped as follows: terminal, 4; lateral, 5; central—(*a*) superficial 5, (*b*) deep 27; late, 10 cases.

Aetiology

Of the fifty-one cases twenty-six knew of no cause, while of the remaining twenty-five, ten had sustained a small cut or roughening of the skin covering the pulp space. Ten knew definitely that they had had a piece of steel or a thorn in the finger, while four attributed the condition to receiving a blow on the finger; one case followed a burn.

Occupation.—Thirty-eight patients were working at a trade when they became infected. In this series four cases occurred in school children. The following table is compiled from the data available.

	Females	Males
Working in a trade	17	21
Not working, including housewives	12	1
	29	22

It is said that butchers, cooks, bakers, and fishmongers are prone to infection. In this series only five patients followed these occupations, whilst machine hands numbered twenty-two. Eleven others were of different trades, including carpenters, a glass polisher, a leather worker, and a typist. In a modern industrial town such workers constitute a majority.

The right hand was involved in twenty-six cases and the left in twenty-one. The thumb and index finger were most often affected. The digits involved were as follows: thumb, fifteen; index finger, fifteen; middle finger, six; ring finger, six; and little finger five times. There is no record in the remaining four cases.

Diagnosis

Early diagnosis of pulp-space infection must be established with certainty before making a radical incision necessary to obtain adequate drainage.

Symptoms.—Aching is the first indication to the patient that all is not well with his finger. He may realize that a trivial cut or one that has healed is about to give rise to further trouble. In twenty-five cases with a known cause the onset of symptoms followed the injury in the following times:

No. of Days	1	2	3	4	6	8-11
No. of Cases	9	2	4	3	2	5

Aching is first noticed when pressure is applied to the end of the finger; later it arises spontaneously and is present the whole time. Very quickly the pain becomes throbbing in character and the patient is incapable of sleep. In this series throbbing and inability to sleep have been taken as cardinal symptoms, and, with the presence of these, in only two cases was pus not found.

Physical Signs.—The pulp of the finger becomes swollen; swelling and induration are appreciable in comparison with the pulp of the corresponding finger of the other hand. In early cases a hyperaemic blush is found round the edge and base of the nail on the dorsum of the involved finger. Later the palmar aspect of the digit may become red and hot, but this is not an invariable finding. Tenderness is an indication of the part of the pulp space involved and the site of early pus formation. It is located by pressing on the pulp with a small probe. Induration is the cardinal sign of inflammation in the pulp, with the disappearance of normal fluctuation. Later with softening, and disorganization of the pulp architecture, fluctuation reappears. The case must be treated before the onset of fluctuation, for at this stage the phalanx is dead.

Treatment

Lancing.—The type of incision described as "lancing" is a vertical incision made in the length of the infected pulp space along its volar aspect. The length of the incision depends upon the courage of the patient and upon the determination of his doctor. Only those loculi in the line of the incision are opened, while those on either side remain inadequately drained. The patient feels some relief, but the finger continues to discharge. Early cases or those in which the infection lies just beneath the skin may be adequately treated by this incision. In hospital practice few cases of this type are seen, and it is therefore difficult to estimate the depth of the infection and to recognize the cases suitable for this treatment. When this incision is deemed to be the correct one it is urged that if resolution does not take place within twenty-four hours a further radical incision should be made. In twelve cases which were lanced a second operation was performed immediately it was realized that the treatment was inadequate. In five of these necrosis of the terminal phalanx did not occur; in five others a sequestrum was demonstrated on radiological examination and sequestrectomy performed; and in the remaining two a further operation for the removal of dead bone was carried out.

The U-shaped Incision (Fig. 2).—A curved incision is made round the end of the finger in front of the nail, cutting back into the pulp space, but never further than within half an inch of the distal skin crease, in order to avoid opening up the flexor sheath and so converting the infection into a tenosynovitis. By this method adequate drainage is obtained, and if performed early no complications arise.

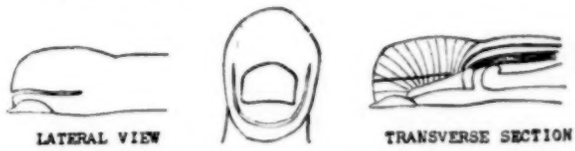

FIG. 2.—Showing the U-shaped incision for cases of terminal infection.

The incision is slow to heal, and does not leave an even scar. With experience of these disadvantages I ceased to employ this incision for the treatment of central infection. The U-shaped incision is the proper treatment for cases of terminal infection. The depth of the incision

is governed by the extent of the pathological changes found at operation.

Transfixion Operation (Fig. 3).—Two incisions are made, one on each side of the affected finger, 2 mm. in front of the edge of the nail, and the knife is passed across the pulp space just in front of the terminal phalanx. The incision extends to within a quarter of an inch of the end of the finger, and proximally to within half an inch of the distal volar crease. By this means all the fibrous tissue septa are divided posteriorly and all the loculi laid open. The palmar aspect is not turned back as a flap, and deformity and slow healing are avoided. There is no terminal scar over the sensitive pulp.

The full transfixion operation is recommended in early cases of central infection because it is impossible to assess the depth to which the pus has travelled backwards. If pus is not found, then with the knife in the transfixion incision cuts are made forwards into the pulp until pus is reached; care should be taken not to perforate the skin. In cases of lateral infection it is necessary to open only one side of the finger.

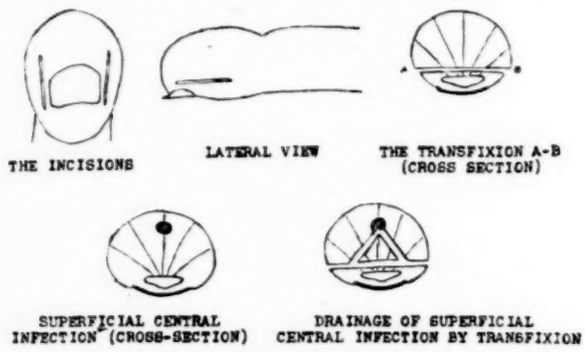
THE INCISIONS
LATERAL VIEW
THE TRANSFIXION A-B (CROSS SECTION)
SUPERFICIAL CENTRAL INFECTION (CROSS-SECTION)
DRAINAGE OF SUPERFICIAL CENTRAL INFECTION BY TRANSFIXION

FIG. 3.—The transfixion operation.

Of the series of fifty-one cases this operation was carried out in thirty-three, and in only two did sequestrum formation occur.

Operative Technique

In hospital practice the infected finger is cleaned with spirit and a sterile towel is placed over the rest of the hand and forearm. Sterile gloves are worn and the patient anaesthetized with nitrous oxide. When a sufficient depth of anaesthesia is reached an assistant applies a tourniquet to the arm. The incisions recommended are then made; the knife is thrust through the pulp space from one lateral incision to the other, with the back of the knife facing proximally to avoid inadvertently opening the flexor sheath.

FIG. 4.

To transfix the pulp space in this way is not an easy matter owing to the toughness of the fibrous tissue. The tourniquet is essential to obtain a bloodless field. It is immediately realized when pus is reached, and if this is not seen the additional incisions described can be made. The pus is mopped away and sinus forceps are pushed into the incision so as to draw a piece of narrow glove-drain through. A magnesium sulphate dressing is applied with a covering of cotton-wool and a tight bandage is placed over all. The tourniquet is now released and the patient allowed to return to consciousness. After leaving the operating table he is rested for ten minutes, at the end of which time blood has soaked through the dressing, necessitating a further application of wool and bandage. The amount of haemorrhage from the incision into the vascular pulp is considerable, but by adopting this method the bleeding is controlled and the patient is able to return home.

Anaesthesia

It is important to use an anaesthetic which allows sufficient time to conduct the operation, without hurry, along the lines indicated; clear vision and a controlled patient are essential.

Gas-inhalation anaesthesia (nitrous oxide) was employed throughout this series: I believe that it gives full satisfaction. Ethyl chloride local anaesthesia was not used. The main objections to this are:

1. Frozen tissue is extremely hard, and it is impossible to make a satisfactory incision until the tissues commence to thaw.

2. Severe pain accompanies the great pressure necessary to cut through the hardened tissue and tends to check thorough treatment. When pus lies deeply it may not be reached.

3. It is impossible to carry out the transfixion operation with ethyl chloride local anaesthesia.

4. It is probable that the process may predispose to further tissue necrosis.

Adequate local anaesthesia can be obtained by digital nerve block at the base of the finger with 2 per cent. novocain infiltration. Local anaesthesia is contraindicated in cases in which the infection has spread beyond the pulp space.

After-treatment

The patient is seen next morning and the finger dressed. Care is taken to leave the rubber drain in position. A fresh magnesium sulphate paste dressing is applied and a short wooden finger-splint incorporated in the dressings. After forty-eight hours the rubber drain can be removed without discomfort and a further dressing given. In cases in which little pus was found the drain is left in for three days. In from four to six days elastoplast dressing is applied; this is kept on, according to the amount of discharge, until soiled. The patient attends at three-day intervals. When tissue destruction is marked separation of necrosed fibrous tissue may take at least three weeks. With elastoplast dressings the wound does not heal until separation is complete.

It is not my practice to use hot baths or fomentations. Hot fomentations had been given in many cases before the hospital treatment. Eckhoff condemns fomentations in the following terms: "The finger does not appear to be getting daily much worse, and the pain is disguised by counter-irritation in the form of hot bathing, hot fomentations, poultices, and other fatal local applications. These I would condemn at the outset. Bathing with or immersion in hot water only leads to generalized redness and tenderness of the finger, which makes diagnosis more difficult and is no lasting comfort to the patient. Fomentations and poultices tend to scald the part at first, and soon get cold and wet, and only serve to increase oedema when applied for more than twenty-four to forty-eight hours, and to spread infection, especially if there is already an open wound." It is my experience that in pre-operative treatment fomentations are of little value and lead to procrastination, and that infection subsides readily with adequate drainage.

The general toxaemia present cannot be ignored and must receive full treatment. The limb is splinted and carried in a sling, and in all cases the patient is advised to cease work and to rest in bed or in the garden. A large fluid intake, from ten to twelve pints daily, is of advantage until resolution is taking place.

Complications

Pulp-space infection must be treated seriously in the early stages before complications arise. Complications are difficult to treat and local deformity is unavoidable. When infection has spread beyond the pulp it may be impossible to check its course. The infection may pass to the tendon sheath, to the hand and palmar bursa, and in advanced cases to the space of Parona in the forearm. Many operations may be required to deal with these complications; amputations and contractures may cripple the patient or impair his working capacity. In unfavourable cases in the presence of virulent organisms, lowered resistance, or protracted course, life may be endangered by general toxaemia or systemic invasion by organisms. In this group of fifty-one cases complications remained local, and this paper is confined to the experience gleaned from these.

Sequestrum Formation

Sequestrum formation must be suspected in all cases in which the infection is of long standing or in which discharge persists. Ten cases of sequestrum formation were met with; of these seven had been lanced when seen, one came up with a sinus, one had discharged spontaneously, and one had been opened by a lateral incision. In the seven cases I believe that sequestrum formation resulted from inadequate drainage at the initial operation, further treatment having been postponed in spite of non-resolution of infection.

In hospital practice cases are referred in which the finger has failed to heal or discomfort and unfavourable progress continue after a preliminary operation. On examination a small wound may be found, and the finger is cyanosed, bulbous, and tender. In chronic cases the wound may be lined by granulation tissue and there is a constant discharge. In the chronic cases, or those in which satisfactory progress does not occur following the preliminary operation, it is essential to have the fullest possible understanding of the underlying pathological changes. A radiograph of the finger must be obtained, lateral and antero-posterior views. The findings must be interpreted with caution. The bone may be rarefied or absorbed in part, but such findings do not call for a surgical attack upon the phalanx, and at this stage adequate drainage may be provided and the bone left alone. Further radiographs must be taken from time to time and the bone watched. A fracture may occur across the base of the phalanx. In children the diaphysis may separate from the epiphysis. Bone erosion or sequestrum formation involves the shaft of the phalanx, and a small area of bone adjacent to the articular surface tends to survive. In this small fragment the flexor tendon is inserted. Sequestrum formation may take place in part or the whole of the phalanx. The dead bone retains its normal density and structure, and is sharply defined. These features form a striking contrast to the adjacent bones, which may have undergone absorption, causing changes in density and definition in the normal architecture. In later cases the terminal interphalangeal joint may be involved and diminution of the joint space or erosion of the adjacent bones may be seen.

Treatment.—The treatment of pulp-space infection complicated by sequestrum formation is governed by the degree of destruction of the involved phalanx. Bone destruction is revealed by the radiograph and by observations during the course of operation. When the radiograph shows a normal terminal phalanx except for a small sequestrum lying on the volar aspect, or the phalanx is eroded, the treatment consists in ensuring adequate drainage by the transfixion operation. The sequestrum is removed, or the phalanx scraped with a small spoon. Care must be taken to avoid the region of the base of the phalanx in which the flexor tendon is inserted. If the case is further advanced and the radiograph shows very extensive changes at the base of the diaphysis, with fracture, and the base of the phalanx is normal, treatment consists in adequate drainage by lateral transfixion; the whole of the terminal part of the phalanx is removed, the small proximal fragment, or in the child the epiphysis, is left to avoid infection of the interphalangeal joint and the flexor sheath. In very neglected cases in which there is involvement of the whole phalanx, including the terminal interphalangeal joint, the complete phalanx is removed through the transfixion incision. In cases in which the flexor sheath is not involved removal of the whole phalanx at this stage, carried out with care, does not add the risk of spread of the infection, because the flexor sheath may be shut off by adhesions.

Tenosynovitis

Tenosynovitis is a disaster of the first magnitude. It is bound to be followed by a prolonged convalescence, with a stiff and deformed finger, and in less favourable cases a crippled hand. The condition may arise from the natural spread of infection, but in practice this does not constitute the most important cause. In the majority of cases it follows in the wake of some surgical intervention. Spread of infection may be precipitated early in the case by extending an incision for drainage of the pulp too far proximally and opening the tendon sheath inadvertently. In later cases tenosynovitis is a complication arising from the treatment of sequestrum formation. It has been stressed in the treatment of cases associated with radiographic changes in the terminal phalanx that careful discrimination must be exercised before interfering with the bone at operation. In cases in which dead bone cannot be demonstrated it is better to provide adequate drainage and to review the case later. In the adult the base of the distal phalanx must be preserved in order to avoid opening the interphalangeal joint and flexor sheath. The base of the distal phalanx must only be removed in cases in which there is infection of the joint or tenosynovitis is present.

REMOVAL OF PHALANX, OPENING OF TENDON SHEATH
FIG. 5.

In cases seen following removal of the base of the phalanx a certain amount of drainage is provided through the tendon sheath being open at its extremity, and infection may remain localized to that part of the flexor sheath opposite the middle phalanx. When the flexor sheath is involved the patient is unwilling to move the affected finger, which becomes red, swollen, and slightly flexed. In two cases a small sinus discharging a thin serous fluid was seen at the distal skin crease. When the diagnosis of tenosynovitis is established lateral drainage must be provided immediately. A dead tendon must be excised

at a subsequent operation. In women and such men as desire it the finger may be conserved, but for the subject employed in manual labour better function may be obtained by amputation.

Summary

1. This paper is based on the experience gained in the study of 183 cases of infections of the hand, of which fifty-one cases were pulp-space infections.

2. Aching followed by throbbing and inability to sleep, associated with induration of the pulp, should be the established indications for immediate operation in pulp-space infection.

3. With adequate drainage inflammation in the pulp readily subsides. If resolution is delayed it is urged that the transfixion operation should be carried out.

4. Complications in pulp-space infection can be prevented by providing adequate drainage in the early stages.

5. In a chronic case it is essential to employ radiological examination before proceeding to treatment.

6. In the treatment of sequestrum formation and the prevention of tenosynovitis it is necessary to employ care in operation, and if possible to conserve the base of the distal phalanx.

ACKNOWLEDGEMENTS.—I wish to thank the honorary surgeons of the Queen's Hospital, Birmingham, for their courtesy in permitting me to carry out this work, and Mr. T. S. Donovan for his advice and criticism in the treatment of these cases. I am indebted to the honorary staff of the radiological department for help in the radiological work. In particular I wish to express my gratitude to Sister Arnold and the nursing staff for the kindness, care, and thought exercised in the treatment of these patients, without which it would have been impossible to conduct the post-operative care and follow-up. My thanks are also due to Mr. Coombs, radiographer to the Sheffield Royal Infirmary, for help with the radiographs. Finally, I wish to record my indebtedness to Dr. F. H. Kemp, clinical assistant in radiology at the Sheffield Royal Infirmary and Hospital, without whose help, criticism, and encouragement this paper would never have been published.

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The annual meeting of the British Association will be held at Nottingham from September 1 to 8 inclusive, under the presidency of Sir Edward Poulton. Thirteen Sections have been arranged—namely, mathematics and physical sciences, chemistry, geology, zoology, geography, economics, engineering, anthropology, physiology, psychology, botany, educational science, and agriculture. Presidential addresses of medical interest are as follows: Dr. G. W. C. Kaye, noise and the nation; Dr. F. L. Pyman, chemotherapeutic research; Professor F. A. E. Crew, the sex ratio; Dr. J. H. Hutton, Assam origins in relation to Oceania; Dr. E. P. Poulton, new views on metabolism and nutrition, and growth in man; Dr. Mary Collins, tests in common use for the diagnosis of colour defect; and Mr. H. G. Wells, the informative content of education. Other sectional discussions will relate to the contribution of physiology to the health of the individual and the community, protein chemistry, recent advances in genetics and cytology, motor vehicles and road safety, and the national food supply. Professor H. Hartridge will deliver a public lecture on illusions of colour. Further information about the programme of meetings, excursions, and accommodation in or near Nottingham may be obtained from the secretary, British Association, Burlington House, London, W.1.

ENTERIC FEVER*

BY

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I must begin by emphasizing that I speak only from the standpoint of a practising medical officer of health. In consequence most of what I have to say must appear somewhat elementary—a reiteration of what is already well known. But administration is mainly concerned with the application of established principles in changing circumstances, and the principles governing the prevention of enteric are no longer in doubt. Although many points of detail still await elucidation, our practical problem is the efficient utilization of the knowledge we already possess.

Reduction of Incidence and Mortality

It is not necessary to adduce statistical evidence as to the great diminution in the incidence of enterica in recent years. When a death rate drops, more or less steadily, from 388 per million in 1870 to 4 per million in 1935 there can be no serious doubt that the disease is becoming less common. Nor are statistics necessary to establish what is within the personal knowledge of senior members of the profession. A generation or two ago enteric was familiar to everyone in practice. To-day it is almost a clinical curiosity: there are many practitioners of standing and experience who have never had occasion to diagnose or treat a case.

But if enteric in its endemic form is no longer a constant menace, it is still capable of manifesting itself on occasion in formidable epidemics. The greatest water-borne outbreak on record—that which occurred at Barcelona and caused 1,847 deaths—was no further back than 1914. The outbreaks at Pforzheim in 1919, at Hanover and Rostoff-on-Don in 1926, and at Lyons in 1929 were all epidemics of the first magnitude, affecting thousands of people, while so recently as 1927 Montreal experienced a milk-borne epidemic, wherein 5,002 persons were infected and a tenth of them died. We have fortunately escaped tragedies of such dimensions, but sufficient outbreaks have occurred in recent years to remind us that enteric is still to be reckoned with as a serious problem in public health.

There is not much room for doubt as to the conditions which have determined the reduction of its incidence. Of no other infective disease can we say with the same confidence that sanitary activities have completely justified themselves. There is no reason to suppose that, in the absence of those activities, enteric would not be as prevalent to-day as it was in the middle of the last century. There is no evidence to suggest that it is less virulent or less capable of spread in a susceptible community, or that herd immunity to infection is greater than in former times. An almost savage scepticism is essential to the sanitarian, who is constantly tempted to believe that improvements in health are the result of his efforts to bring them about; but in this connexion scepticism appears misplaced.

The diminution of mortality, so far as Great Britain is concerned, came in three stages. From the early 'seventies it fell fairly steadily till 1885. From that date till about 1900 there was little improvement. At the

* Read in opening a discussion in the Section of Hygiene and Public Health at the Annual Meeting of the British Medical Association, Belfast, 1937.

beginning of the century the fall recommenced, and has continued till the present day.

One is aware of the temptation to over-simplification in discussing such phenomena, but there does appear to be justification for believing that the change in the incidence of the disease reflects the change in our views as to its aetiology. The hypothesis that insanitary conditions were the *cause* of infectious disease has been replaced by the belief that they are responsible for its spread, and the acceptance of the latter view has greatly influenced our attitude towards prevention. The first efforts of sanitary reformers were directed to environmental improvements—provision of better water supplies and substitution of sewers for privies. The success of those efforts was explained in terms of the pythogenic theory, Pettenkofer's ground-water theory, and the belief that enteric might be spread by sewer air—views that were held by observers whose opinions were entitled to all respect, but which, despite their value in promoting reform, are now regarded as ill founded.

Advances in Pathology

Further advance had to wait on the more accurate knowledge of pathology which accumulated during the last years of the century. The bacterial origin of the disease was recognized by the profession, the introduction of Widal's test put diagnosis on a sound basis, and the conviction that the enteric patient was the real source of enteric infection gained ground. Finally, the discovery of the potentialities of the carrier provided a credible explanation of the apparent *de novo* origin of epidemics.

Meantime, sanitary administrative machinery was being improved. More attention was given to the protection of food against gross contamination, and, in particular, the practice of removing enteric patients to hospital was increasing. This, I suggest, was one of the most important causes of the disappearance of endemic enteric, especially in rural areas, where "sanitary" improvement was often non-existent. I know many parishes where the disease, common during the 'nineties, has been practically unknown during the present century. There are still no sewers, the water supplies are still obviously open to pollution, flies still pass unchecked from privy to larder, but the enteric patient is no longer allowed to remain in a country cottage throughout the course of his illness, a constant danger to his immediate associates, a potential menace to the whole district.

Recently the carrier problem has been exhaustively studied, much information on preventive inoculation has been collected, and important advances in bacteriological technique have made it possible in many cases to obtain direct evidence on what in former days could only be inferred. But nothing has happened to modify the orthodox belief that the prevention of epidemic enteric is essentially a matter of protecting drinking-water and food, especially milk, from specific infection.

Now it is obvious that if the incidence of an infectious disease falls, not from natural causes but as a result of human effort, that effort must be maintained if recrudescence is to be avoided, and we must consider from time to time whether accumulation of knowledge justifies, or altered conditions demand, any change of our methods.

An indication that defensive arrangements are not yet perfect is the fact that water-borne and milk-borne epidemics still occur from time to time. These differ in their genesis. Recent investigations have shown that the life of *B. typhosus* in sewage may be considerably longer than was generally supposed, but the actual occurrence of water-borne epidemics seems to depend on recent and gross contamination, which disappears fairly rapidly—from an epidemiological if not from a bacteriological point of view—unless pollution be continuous. In any case, whether a sewage-polluted stream, a clean source accidentally fouled by excreta, or a well or leaking main contaminated by a faulty sewer be in question, infection is generally massive and comprises a vast bacterial flora in addition to *B. typhosus*. This appears to be the explanation of the occurrence of the widespread outbreaks of gastritis and enteritis which frequently precede water-borne epidemics. At Hanover about 30,000 and at Rostoff-on-Don about 40,000 cases of those conditions occurred just before the appearance of enteric, and the same thing has been observed on a smaller scale in many other places.

Another phenomenon, apparently due to the same cause, is the occurrence of a certain proportion of cases of paratyphoid fever along with the true Eberthian infection. In the two outbreaks I have mentioned about 6 per cent. and 16 per cent. respectively of the total cases were paratyphoid infections. There is not at present sufficient information on the point to speak with certainty, but it seems probable that this coexistence of typhoid and paratyphoid is specially characteristic of water-borne outbreaks, and indicates original massive contamination.

Infection by shellfish may perhaps be considered as a special form of water-borne disease resulting from gross and continuous pollution. It is interesting to note that in many instances shellfish infection has been associated with preliminary enteritis resembling that occurring before ordinary water-borne epidemics. The enteric-infected oyster still constitutes a serious problem in some places. That its importance for us has diminished is due in no small degree to research on the subject in Belfast.

Infection of milk is another affair. Though dairy hygiene still falls short of perfection, *gross* excremental pollution from human sources is unlikely. The amount of pathogenic material, whether derived from infected water or from a carrier's hands, is presumably small, but it is introduced into what may be an excellent medium for the growth of *B. typhosus*. It is this circumstance which makes prevention of milk-borne epidemics especially difficult. It is not possible to protect the milk supply against the risk of infection by a carrier or an unrecognized case of enteric. A dairyman, however conscientious, cannot be expected to recognize conditions which an experienced physician may have difficulty in diagnosing.

Protection of Water and Milk Supplies

As water and milk become infected in different ways they must be protected by different methods. Safeguarding of water is largely a question of finance, and there should be little need for discussion so far as large towns are concerned. Sources protected against pollution, adequate storage, efficient filtration, and, when necessary, chemical treatment constitute a succession of lines of defence sufficient to secure immunity. If one of those desiderata be lacking special emphasis must be laid on the others. Large communities, moreover, can provide expert supervision and sufficient staff to maintain efficiency. The experience of London in particular shows that by taking proper precautions the risk of water-borne infection may be reduced to negligible proportions.

The position of small towns, villages, and rural communities is different. Their water supplies are still frequently open to serious criticism, but the confidence re-

sulting from years of immunity and the relatively heavy financial burden entailed by improvements discourage sanitary reform. Such small supplies are often under the charge of an officer who has many other duties and who may have no real knowledge of water problems. Serious defects may exist unrecognized until they are discovered by accident or in the course of an epidemic. In a water-borne outbreak affecting sixty-five people, with which I had to deal some years ago, it was found that infection had occurred at leaking joints in the pipes conveying spring water to the collecting-tank. These might probably have been detected and remedied by a trained water engineer, but not unnaturally escaped the observation of the village factotum.

In such small communities, which may have provided sewers and gravitation water supplies many years ago but have neglected to maintain them in a proper state of efficiency, the risk of pollution increases steadily. Most medical officers of rural areas have probably seen contemporary examples of sanitary defects closely resembling those responsible for the classical water-borne epidemics of fifty years ago. It is totally erroneous to suppose that the improvement in water supply during the last quarter of the nineteenth century affected the whole country. There are still many places where the absence of water-borne disease depends on the lack of a source of infection rather than on safeguards against its spread. This is not likely to be remedied until water supply is recognized as a regional rather than a local problem and assistance given to those places whose own resources are inadequate to its solution.

A special danger in rural areas is the "auxiliary" supply, used to supplement an insufficient source of drinking-water. It is practically certain that it will be drunk occasionally. I have known one instance in which cases of enteric occurred at a farm which drew its drinking-water from a well but had an auxiliary supply from a stream near by. The patients were known to have drunk from the latter source despite warnings. About a mile upstream was a cottage provided with a water-closet draining to a cesspool which discharged into the stream. The tenant of this cottage proved to be a woman who had been shown several years previously to be a typhoid carrier, and we were successful in cultivating *B. typhosus* from the cesspool contents.

An adequately protected water supply is of importance in the prevention of milk-borne epidemics. It is of course possible that an outbreak originally due to polluted water may be continued by milk through someone connected with the dairy trade having been a victim of the water-borne infection. This was well exemplified at Santa Ana (Ca.) in 1924, when an epidemic due to sewage-polluted water and affecting some 370 persons was followed by a milk-borne outbreak of 200 cases in a neighbouring town, which had a separate water supply but derived much of its milk from a dairy at Santa Ana. The risk of such occurrences is very grave, and should enteric be prevalent in a dairying country it is essential that everyone connected with the milk business be kept under close supervision and all milk pasteurized till the danger of infection is past.

Again, milk may be infected through polluted water being used to wash utensils. Theoretically this should never happen, but until all dairies are fully equipped in accordance with modern ideas this risk cannot be ignored. There are cases in which milk has been infected during the cooling process, either by a leaking cooler allowing water to gain access to the milk, or, in the absence of a sufficient water supply, by the milk-cans having been set to cool in a stream which proved to be sewage-polluted. This appears to have caused the St. Catherine (Ontario) epidemic of paratyphoid fever in 1931. In this case 475 cases were traced to milk from two farms where milk-cans were cooled in a small creek that was contaminated by drainage from a district in which paratyphoid fever had been prevalent in the previous year. Such incidents show the need for securing that all water supplies, whether for drinking or for use in the production of milk or other foods, shall be protected against the risk of contamination. Neglect of this may have far-reaching consequences. A single case of enteric fever in a rural area may mean a big milk-borne epidemic in a distant city. Dr. Russell, then medical officer of health for Glasgow, said many years ago: "The status of enteric fever in Glasgow mainly depends upon rural sanitary administration." The experience of many large cities, both in Europe and in America, has proved that the truth of the observation is of general application.

The Carrier as a Cause of Infection

The main cause of milk-borne outbreaks is of course infection by a carrier, missed case, or contact who handles milk. Unfortunately his existence is generally unsuspected until the outbreak occurs, and even then it may be difficult to confirm. Proof of the carrier state entails detection of the causative bacillus in urine or faeces, and the intermittency of bacillary excretion by carriers may prevent this proof being obtained. Moreover, as I have learned by experience, samples submitted by a suspected carrier may have been borrowed for the occasion! Even after the carrier has been recognized the period during which he can be certified and put under restrictions is too short, and recertification may present difficulties. It should be recognized that after a year the carrier condition is permanent, and recertification should not be required.

Serological examination of suspects may help in detecting the carrier. The ordinary Widal test, however, does not give a sufficiently certain indication. I am not competent to discuss this point, but it seems possible that research on antigenic structure may eventually provide a reliable means of identification. Such a test would be of great value in practical administration.

It is a question whether anything short of universal pasteurization can protect against the risk of milk-borne enteric. The objection that this might lead to neglect of cleanliness in dairying could be met by fixing a sufficiently stringent prepasteurization standard, though the practical enforcement of such a standard would not be easy. Again, pasteurization is not an absolute safeguard, as the experience of Montreal and other places has shown. It would still be necessary to ensure that nobody capable of spreading infection was allowed to handle the pasteurized milk. A recognized carrier should of course be absolutely precluded from taking any part in the milk trade; indeed, in any business entailing handling food. But the control of carriers is so large a question, and raises so many issues, that I can only mention it here.

Conclusion

There are many other aspects of the subject which I should like to discuss did space permit, but there are two in particular which I emphasize in conclusion.

First, enteric fever should whenever possible be treated in hospital. The risk of infection is too great and too prolonged to justify home isolation, except in special cases, and it is in the patient's interest that he should receive

the expert nursing which is more important in this than in almost any other infectious disease.

Secondly, every outbreak should be fully studied by an expert bacteriologist. It seems that sometimes no more is done than the minimum necessary for diagnosis. This is not enough. The bacteriological history of each patient should be recorded as fully as the clinical. Investigation of the channels of spread should be checked by repeated examinations of sewage, water, milk, etc., and this may now be attempted with a reasonable hope of success. If it were done regularly our knowledge of and control over enteric fever would be materially increased.

THE SEX GLANDS

THEIR ANATOMY, PHYSIOLOGY, AND BIOCHEMISTRY *

BY

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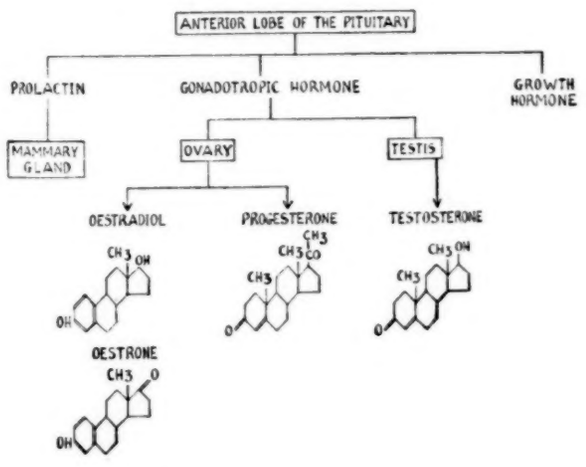
Since subsequent speakers will discuss in detail the administration of various sex hormone products, I shall perhaps be able to fulfil my function as the opener by giving a brief summary of the present position with regard to therapeutic substances. The object of those who organize discussions such as this is to provide a practical survey of the subject, and I therefore propose to deal only with those substances which are of practical value and which can be obtained in an active stabilized form in the ordinary commercial market.

In the physiology of the sex glands it is necessary to consider two separate stages: first, the activation of the secondary sex glands by hormones of the anterior lobe of the pituitary; and, secondly, the hormones secreted by the sex glands after activation. The relation between the anterior lobe of the pituitary, the ovaries and testes, and the mammary glands can be seen in the following diagram, which is self-explanatory.



Hormones of the Anterior Lobe of the Pituitary

It is a well-known fact that the injection of extracts from the anterior lobe of the pituitary into immature animals will produce the precocious appearance of puberty associated with ovulation and the formation of corpora lutea in the case of the female; and in the case of the male descent of the testis and spermatogenesis will occur. Conversely, in the hypophysectomized adult animal all sexual activity ceases; and this again can be restored by the injection of a suitable extract. Up to the present, however, there is no such extract of the anterior lobe available for clinical trial.

It was discovered that in certain species the urine of pregnancy contains a substance capable of stimulating the ovaries of the immature animal. The test for the presence of this gonadotropic substance forms the basis for the well-known Aschheim-Zondek reaction; the substance was given the name of prolan by the original German investigators. The problem then arose as to whether this was a single substance or whether, according to the German view, it was composed of two parts—prolan A stimulating the ripening of the follicle, and prolan B being responsible for the luteinization of the follicle. The material which is at present on the market is agreed by nearly all workers to be almost entirely the luteinizing fraction. Therefore when we speak in subsequent discussions of the urinary gonadotropic hormone it must be borne in mind that we are dealing almost entirely with the luteinizing fraction.

It has recently been shown that the serum of the pregnant mare during certain stages of gestation contains a very active ovary-stimulating factor. This has been separated, and is available for clinical trial under the name of "antex." Most workers have agreed that antex is mainly follicle-stimulating, as opposed to the luteinizing fraction.

With these two substances—namely, urinary prolan and antex—it would appear that the clinician is provided with all the factors necessary for the control of ovarian secretion; but the clinical applications of these will be discussed by subsequent speakers. With regard to the chemical constitution of these substances little is known, but they are available in a stable and standardized form.

Hormones of the Ovary

Reference to the accompanying diagram will show that there are three substances—namely, oestrone, oestradiol, and progesterone. There are other oestrogenic compounds in addition to these, but since they are not available for clinical trial they will not be discussed here. Both oestrone and oestradiol, when injected into ovariectomized animals, will produce all the changes associated with the sexual cycle in the rodent. They will also cause the onset of premature puberty, and they only differ one from the other in their relative potency; oestradiol is by far the more potent of the two substances. Both oestrone and oestradiol are available clinically in the form of benzoates. These esters are used because their absorption is slower, and therefore with a single injection it is possible to get an effect very nearly approaching that of the normal function.

If either of these substances be administered to the monkey it is found that the menstrual cycle cannot be reproduced. Experiments on the ovariectomized rabbit have shown that a second factor is necessary for the complete reproduction of the cycle, and that this may be obtained from the corpus luteum. This material, called progesterone, has been isolated from alcoholic extracts of the corpus luteum, and has been characterized chemically. It is produced commercially in two ways—from the corpora lutea and also by the complex degradation of stigmasterol. If oestrone or oestradiol be in-

* Read in opening a discussion in the Section of Anatomy, Physiology, and Biochemistry at the Annual Meeting of the British Medical Association, Belfast, 1937.

jected into an ovariectomized woman for a certain length of time, and this be followed by injections of progesterone, a complete menstrual cycle can be instituted. It can thus be stated that the clinician is supplied with the necessary agents for the production of the menstrual cycle.

One of the great difficulties in the past has been the question of dosage. When these substances were first isolated their effects were studied exclusively on rats and mice and other small animals. This led workers to think and speak in terms of rat units and mouse units. Consequently when raw material first became available for clinical trial patients were injected with relatively small numbers of units. No progress at all was made until it was realized that sex hormones all follow the rules of body-weight ratio. It was thus shown that the use of the same material with identical methods of injection and smearing gave a rat unit which was roughly ten times the mouse unit—that is, in proportion to the body weight. It follows, therefore, that hundreds of thousands of mouse units will have to be given to the human subject to obtain similar results. This question of high dosage is apparent rather than real, and it is to be hoped that in the near future these substances will be prescribed like other therapeutic chemical agents, in terms of weight of the pure chemical substance.

Hormones of the Testis

The isolation of these substances has been the result of intensive studies of the effect of extracts of the testis on the comb growth in the capon. The fundamental observation was a demonstration that an alcoholic extract of bull's testis was capable of restoring the capon's comb to that of a normal cock. The most potent substance of known chemical constitution at the present time is called testosterone; the formula can be seen in the diagram. This hormone is produced by the complex method of sterol degradation, and it is standardized by its comb-growth-promoting properties.

Apart from promoting growth of the capon's comb, this hormone is able to restore the atrophied seminal vesicles of the castrated animal to their former size. The clinical applications of this substance have not yet been fully explored, since it is only comparatively recently that large amounts of material have been available for investigation. Its use has been suggested for the treatment of enlargement of the prostate and for replacement therapy in all conditions where the secondary male sexual characteristics have diminished. Its use in the treatment of enlarged prostate is based on the observation that prostatic enlargement caused by oestrone in animals may be successfully treated by the administration of testosterone.

Form of Administration

When the pure crystalline hormones were first isolated one of the difficulties at once appreciated was the question of absorption from subcutaneous injection. Earlier experiments had shown the fundamental difference of behaviour between the injection of hormones dissolved in oil and those administered in the form of an alcohol-aqueous solution. In general it may be stated that the ideal medium for injection is one which will allow a slow and steady absorption, thus imitating as nearly as possible the natural conditions. In the case of the sex hormones this is accomplished by their administration in the form of oily solutions. In order to slow up the absorption still more various esters have been prepared. Thus oestrone and oestradiol are available in the form of oily solutions of their benzoates. The benzoate is slowly hydrolysed in the body, thus giving a steady supply of the oestrogenic agent to the subject.

In the case of testosterone a very interesting observation was made when it was shown that the presence of certain fatty substances very much enhanced the activity. Out of this has developed the ester testosterone propionate, in which form the hormone is available to-day. This ester is many times more potent than the free testosterone, and the whole question of potency of this group of substances is very largely bound up with the type of ester which is administered.

Evaluation of Results of Therapy

This presents little difficulty in the treatment of amenorrhoea, since success or failure is apparent. On the other hand, in the treatment of menopausal disturbances it is difficult to exclude the psychological element. Recently, however, the introduction of the vaginal-smear method has provided us with an entirely new technique for the evaluation of therapeutic measures in the menopause. It has been shown that the vaginal smear of post-menopausal women presents an entirely different cell picture from that of pre-menopausal women, and that suitable therapy will transform the post-menopausal smear into the pre-menopausal one. Subsequent speakers will describe their experience with this new method.

Conclusion

In conclusion, it can now be stated with certainty that the labours of the biologist and the organic chemist have placed in the hands of the clinician a series of very powerful therapeutic substances. No longer is it possible for the practitioner to doubt the activity of endocrine products. If he will but take the trouble it is possible for him to obtain highly potent, stable, and standardized preparations of hormones; and let us hope that the discussion which is to follow will give him some indication of the possible uses to which he can put these substances.

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H. G. Huber (*Kinderartzl. Prax.*, **8**, 152) states that while encephalitis is not a rare event in certain infectious diseases, such as influenza, measles, whooping-cough, varicella, mumps, small-pox, scarlet fever, and vaccinia, only a few cases have been recorded of its occurrence in typhoid fever. In the cases described by Elias, Schächter, and Lemlakis typhoid encephalitis was manifested by bulbar, mesencephalic, spastic, cerebellar, or cortical symptoms. The bulbar type with tachycardia and polypnoea is usually fatal; paralysis of deglutition is rare. In the mesencephalic type the symptoms are hyperkinesia, pseudo-lethargy, oculomotor palsies, and in rare instances facial paralysis; while in the cortical type hemiplegia, epilepsy, and aphasia appear. Huber records the case of a girl, aged 11, who in the second week of typhoid fever developed stupor, facial paresis, spasms of the extremities, slight nuchal rigidity, Kernig's and Brudzinski's signs, and well-marked aphasia. The tuberculin reaction and *x*-ray examination of the chest were negative. Complete recovery took place after ten weeks' illness.

Clinical Memoranda

Undulant Fever: Death from Paralytic Ileus

A case of undulant fever which terminated fatally in a man aged 64 seemed interesting enough to warrant its being placed on record.

CASE REPORT

This patient's illness began on January 16, 1937, and he was first seen on account of an attack of faintness. He then had a blood pressure of 123/68 mm. Hg. and a pulse rate of 88, and he complained of abdominal colic and distension. A nervous breakdown in the previous year had made him very apprehensive about his health, and I (A. O.-E.) imagined that the irritable condition of heart and bowel was due to vagla activity. After a few days in bed his heart condition improved and his pulse rate was 72 and his blood pressure 136/76 mm. Hg. With one tablet of allonal (5 grains) at night he slept well, and the colic had abated, although the stools were unformed and frequent. His temperature had been normal throughout.

On January 25 he became decidedly worse, and a mixture of bismuth carb. 10 grains, salol 5 grains, and chlorodyne 10 minims seemed to have no effect. Dr. Parry saw him with me in consultation, and laudanum was substituted for chlorodyne, but the stools were still very frequent and were completely unformed. On February 3 Dr. Parry kindly took over the case as I had to go on sick leave. On the same day the patient was transferred to a nursing home in Hove. A blood test was taken, and the report of the pathologist was as follows:

Widal's reaction for typhoid (H and O), paratyphoid A (H), and paratyphoid B (H and O) is negative; no agglutination in any dilution. The reaction for *Br. abortus* is positive, showing complete agglutination up to a dilution of 1 in 320 and nearly complete agglutination in 1 in 640.

At the time of his removal he was at the end of a wave of fever, and for three days his temperature was practically normal; it then gradually rose to about 102° F., and this wave continued until his death four weeks later. The immediate cause was paralytic ileus. This began about two weeks before death with gradually increasing abdominal distension, which reached such a stage that large coils of distended intestine were visible. He still had infrequent liquid motions, and flatus passed freely when a rectal tube was inserted. For the condition of ileus the following remedies were tried: enemata of turpentine, enemata of asafoetida, turpentine stupes, hot fomentations, and an electric pad to the abdomen; injections of pituitrin and of acetylcholine, and doses by the mouth of oil of peppermint, oil of cloves, and oil of izal, all in keratin-coated capsules; but nothing had any appreciable effect, and he died of toxaemia about six weeks after the beginning of his illness. No trace of *Br. abortus* was found in any of the cows in the herd from which he obtained his milk supply.

I (L. A. P.) had the kind assistance of Dr. Donald Hall, who attended the case with me on several occasions. Lord Horder, who also saw the case, told us that paralytic ileus was at one time quite common in typhoid cases, and that puncture of the intestine had been tried as a remedy, naturally with no success. It obviously could have no more effect than the passage of a rectal tube. This condition is also described as occurring in other serious febrile conditions such as lobar pneumonia.

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L. A. PARRY, M.D., F.R.C.S.

Reviews

THE ART OF PROGNOSIS

Prognosis. Volume 2. (Pp. 410. 10s. 6d. net.) London: The Lancet, Ltd. 1937.

Prognosis, admittedly, is a perplexing chapter in the art of medicine; here particularly must be applied the aphorism, judgement is difficult and even experience fallacious. And yet the art of foreseeing the event is a matter of moment to the repute of the medical practitioner and still more to the prospects, immediate and remote, of the patient. For the most part the successful practice of the art must be self-taught by the doctor himself; no absolute rules can be defined, and balanced statistics are of small value in the presence of the individual sufferer. Manifestly the junior practitioner may expect to learn something from his seniors if only the teaching is effectively presented, and it is a series of successful efforts in this direction that distinguishes the second volume of the *Lancet's* collected articles on prognosis. The subjects considered number some sixty chapters and range from such narrow issues as fractures of the os calcis and breech presentations to the larger questions associated with hypertension, disseminated sclerosis, bronchitis, emphysema, and the rest. Each author has established a title to be heard on the subject on which he writes, and there may be detected throughout the book evidences of a common direction or purpose—namely, the determination, on the basis of clinical studies, to put at the disposal of readers practical and helpful guidance. Many of the contributions are in this respect clinical teaching of the highest order, and even experienced practitioners will find not only interest but also help from their perusal. The volume deserves a cordial welcome and recognition.

CORONARY DISEASE

Diseases of the Coronary Arteries and Cardiac Pain. Edited by Robert M. Levy, M.D. (Pp. 445; 97 figures. 25s. net.) New York: The Macmillan Company; London: Macmillan and Co. Ltd. 1936.

A quarter of a century has passed since the clinical observations of Herrick gave to the medical profession a means of recognizing infarction of the heart. This stimulus evoked a widespread interest in acute ischaemia of the heart muscle, which reached its peak in this country more than a decade later. But the floodlight turned upon the coronary arteries resulted also in a concentrated interest upon other aspects of their pathology. In many European countries and in America innumerable researches were directed to the physiology and anatomy of the coronary vessels and further to the clinical features and treatment of all grades of coronary artery disease. And since the trigger for this discharge of energy was pressed by an American, it is fitting that it should fall to the lot of one of his countrymen to assess the present position of medical knowledge on these matters.

Dr. Robert L. Levy in his treatise has assembled, with the help of authoritative contributors, a survey of this problematic department of medicine. The names of Drs. A. E. Cohn, J. B. Herrick, and C. J. Wiggers, who have formed an advisory editorial committee, indicate the broad philosophic, clinical, and physiological basis upon which the work has been planned. Discussions of the mechanism of the coronary circulation, cardiac pain, and

the clinical features of coronary syndromes are followed by sections on medical and surgical treatment. Although trinitrin undoubtedly benefits many patients and may substantially increase the capacity of an anginal patient for work, there remain actually many whose effort tolerance is so greatly restricted by pain that useful activity becomes impossible.

It is perhaps time for more consideration to be accorded to operative methods of treatment. Dr. J. C. White in the present volume holds that paravertebral alcohol injection of the upper four thoracic sympathetic ganglia is a method that cannot be dangerous and which brings good or fair relief in more than 80 per cent. of cases. The special indications for injection treatment, sympathectomy, the operation of total thyroidectomy, and the methods of supplementing the coronary circulation from neighbouring regions, such as the omentopexy now being developed by O'Shaughnessy in this country, are also discussed.

This book unquestionably takes its place among the important contributions to cardiology at the present day.

DIET AND CANCER

Cancer and Diet. With Facts and Observations on Related Subjects. By Frederick L. Hoffmann, LL.D. (Pp. 767; 15 illustrations. 5 dollars or 22s. 6d.) Baltimore: The Williams and Wilkins Co.; London: Baillière, Tindall and Cox. 1937.

Any medical reader who has kept in touch with the long series of publications relating to cancer issued by Dr. Frederick L. Hoffmann would be ungenerous if he refrained from a tribute of respect to the author, whose latest work, a stout volume of 767 pages, is before us. Dr. Hoffmann set himself two tasks. The first was to collect and summarize the views of others on the relation between dietetic habits and malignant disease and to epitomize current opinion on the processes of metabolism with special reference to malignant disease. The second was to analyse information respecting the physical and physiological characteristics and the dietetic habits of 2,234 patients suffering from cancer and 1,149 controls, "chiefly visitors to hospitals or patients suffering from minor ailments not suggestive of cancerous affections."

Not the least engaging of Dr. Hoffmann's characteristics is candour. He does not claim to have made an exhaustive study of the literature, and he more than once remarks that some of the works he has examined are of too technical a character for it to be possible for him to abstract them. What he *has* abstracted he has summarized clearly; and if it can be said, and said truly, that much which he describes is of little serious value (indeed he remarks that himself) and much he omits is worthy of attention, a medical reader will reflect upon the difficulty of the task. At the lowest, this half of the book will acquaint an intelligent layman with some of the trends of opinion. The other half of the task (beginning at Part IV) is more fully within Dr. Hoffmann's scope. He has tabulated his data in a great variety of ways. It is perhaps a pity that it was not possible to analyse the data of controls as completely as those of patients, for instance, by occupation, because dietetic habits must depend largely upon economic status, but the pains taken are evident. The statistical conclusion reached is that a principal difference between the cancer patients and the controls is the quantitative and qualitative richness of the diets of the former.

"The caloric intake is shown to be excessive in cancer patients who are not in need, in adult life, of so much energy-yielding foods in view of diminished exertion and the almost universal use of mechanical equipment diminishing the amount of bodily exertion generally. The study emphasizes the conclusion that it is not so much a question of any particular type of food product but that all food products seem to be taken in excess, particularly those of high organic content, or energy-yielding foods, beyond the needs of body requirements."

Dr. Hoffmann concludes his work with these words:

"I consider my duty discharged in presenting the facts as I have found them, which lead to the conclusion that over-nutrition is common in the case of cancer patients to a remarkable and exceptional degree, and that over-abundant food consumption unquestionably is the underlying cause of the root condition of cancer in modern life."

No doubt this conclusion will not meet with universal acceptance, but the author's patient accumulation of data should receive universal approval.

SOCIAL MOVEMENTS

Aspects of a Changing Social Structure. By Sir Percy Alden, M.A. Sir Halley Stewart Lecture, 1936. (Pp. 190. 4s. 6d. net.) London: G. Allen and Unwin. 1937.

In accordance with the purposes of the Trust under the auspices of which these lectures are delivered, the author in his preface states that his underlying purpose "may be said to be the growing interest of the State in social and industrial problems leading to a wide range of measures designed to give security to the citizen and to the basic industries upon which in the end both citizen and the State depend." This theme is pursued through eight chapters, the first four of which deal with the main social services (with the notable exception of education), and the next three with the organization of industry, with particular relation to coal and to agriculture. A short concluding chapter is in the nature of a summary.

The earlier chapters are those which may be expected to interest medical readers more particularly. They are concerned with the social provision made for the child, for the health of the community, for housing, and for security of the worker in times of unemployment and in old age. They set out relevant facts and figures comprehensively and accurately; but however convenient this may be the result can only be described as commonplace. There is nothing new in the information given, and but little that is very fresh or helpful in the comment. Most thoughtful medical practitioners, social workers, and students of social questions will not find anything with which they are not already familiar. The family doctor, indeed, though not ungrateful for a mild appreciation of his usefulness, will easily detect a not unimportant lack of understanding of the real nature and extent of his functions; nor will any class of official concerned with national health insurance be prepared to endorse the statement that "the approved societies merely pay out and they are in no way concerned as to whether the payment is justifiable." Most of the author's suggestions for improvement are crude, and are not sufficiently developed or expounded to be useful contributions to the discussion. For example, he says: "What is wanted is a periodical health examination from childhood upwards . . . carried out by groups of doctors, some of whom would be specialists." And again: "A properly organized system would make maternity and child welfare officers responsible for the health of children under 5 years of age; school medical officers should take charge from that age onwards until the children leave school, and that after that the panel doctors, or at any rate some of them, might be salaried officers of the local authority and of course be responsible to the Public Health Committee."

These are simple notions, but those with a little more knowledge and experience of the conditions involved will think them impracticable and highly undesirable.

While Sir Percy Alden's book may be enlightening to the uninformed reader in several directions, the mere absence of serious inaccuracy in the statement of facts cannot be regarded as a sufficient substitute for the lack of thoughtful discussion of principles and methods for which the occasion afforded abundant opportunity.

PROCREATION AND BIRTH CONTROL

Marriage and Periodic Abstinence. The Natural Method of Scientific Family Regulation. By J. G. H. Holt, M.D. (Pp. 174. 8s. 6d. net.) London: Longmans Green and Co. 1937.

Voluntary Parenthood. By Edward F. Griffith, M.R.C.S., L.R.C.P. Foreword by Sir Humphry Rolleston, Bt., G.C.V.O. (Pp. 141; illustrated. 5s. net.) London: W. Heinemann. 1937.

To the practitioner unacquainted with recent work concerning the ovulation process, Dr. Holt's small handbook offers most interesting reading. The matter is of great practical importance both to the obstetrician and to the general practitioner. Now that it is possible to place the expected date of ovulation—often even to recognize by symptoms the exact moment of its occurrence—the very best opportunity for conception can be advised to women suffering from sterility. Conversely, the unfertile dates in the menstrual cycle may be calculated and utilized for coitus by couples desirous of avoiding conception.

Dr. Holt's object is to explain the rationale for calculating the days of the menstrual cycle which will constitute the so-called "safe period" for unfertile coitus. Useful as this knowledge undoubtedly is, it is unfortunate that the author is so prejudiced against all other recognized practices of contraception. Possibly it is this attitude which induces him to overlook the impracticability of his advice for use by the average married couple.

Apart from the fact that men and women do not care to regulate their emotional life by dates and schedules, the occurrence of ovulation, besides being impossible to assess during such periods as lactation, prolonged amenorrhoea, or the climacteric, is subject to many variations. Among others the author mentions changes of climate or occupation (holiday time), emotions (such as joy, sorrow, trouble, or fright); over-exertion—even the "worry and fatigue of spring cleaning" has been known to upset the cycle. His advice for such occurrences seems hardly practical enough—"Pass at once into abstinence and seek medical advice."

Dr. Holt gives a good summary of the work done on ovulation by recent investigators, and supports it by excellent material collected from his own case-histories, as well as by reference to historical customs concerning the periodicity of human fecundity. The reader is left with little doubt that valuable light has been shed on the extremely interesting subject of procreation.

It would be impossible at the present day to produce a book on birth control which would be startling or brilliant. The spate of books published on this subject suggests that an audience must still exist, and for this Dr. Griffith's volume offers as good a presentation of the subject as any others we have met. The book is intended for nurses, midwives, and social workers, and could be read by any layman. The author shows a sympathetic understanding of the anxiety with which the working-class mother views the rapid increase of her family. He lays particular emphasis on the prevalence of coitus interruptus, with its train of discordant bodily and psychical symptoms. In his opinion this practice accounts for half the unhappiness in marriage. On such grounds alone it is necessary that better contraceptive knowledge be made generally available.

Interesting statistical data are given to show the prevalence of abortion—either achieved or attempted; the death rate of infants born in quick succession is double that of infants born with a spacing of at least two years. For these reasons also it is the duty of the midwife or accoucheur to see that the patient is instructed in contraceptive technique after childbirth. In addition to such considerations the book gives a few chapters on general biological facts, such as the physiology of conception, secondary sex characteristics, and endocrine functions. The appendix usefully supplies a list of the voluntary and municipal birth control clinics.

Notes on Books

Dr. H. HALDIN-DAVIS has now produced a third edition of his valuable book *Skin Diseases in General Practice* (H. Milford, Oxford University Press, 17s. 6d.). It will be remembered that in this work diseases of the skin are arranged according to their topographical distribution. At the beginning of each chapter appears a list of the eruptions found on that particular part of the body surface of which the chapter treats. Since many common diseases may affect any or every area the three introductory chapters are devoted to diseases which may, on the one hand, be most widely spread or, on the other, extremely limited in their manifestations—septic infections, eczema, and syphilis. Further, references are given from chapter to chapter. This regional plan is very helpful to the practitioner. The indications for treatment are clear and thorough, and there are many illustrations. In order to bring the book up to date Dr. Haldin-Davis has thoroughly revised it and rewritten many passages, with special emphasis on the "elastoplast" treatment of varicose ulcers, the advance in radium treatment for malignant disease of the skin, and the introduction of compounds of gold and other metals in the treatment of lupus erythematosus.

Under the new title of *Tropical Dispensary Handbook* a third edition is now issued of Dr. CLEMENT CHESTERMAN'S *African Dispensary Handbook*. The first was reviewed in these columns on May 10, 1930. The scope of this excellent book has been extended in order to make it useful to workers in all parts of the Tropics. For the information of those unfamiliar with the earlier editions it may be stated that Dr. Chesterman's work was originally compiled from notes of lectures to African medical assistants, and the author's object, which he admirably achieves, is to provide a vade-mecum for the partially trained natives who staff the outlying dispensaries among rural communities. The book is divided into four sections dealing respectively with medical diseases, surgical diseases, pharmacology, and laboratory work. It is published in London by the United Society for Christian Literature at 7s. 6d.

Volume X 1934–5 of the *Transactions of the Bose Research Institute*, Calcutta, describes investigations carried out in different branches of biophysics, in anthropology, and in advanced physics under the direction of Sir JAGADIS BOSE, D.Sc., F.R.S. It consists of twelve chapters, with a brief general introduction by the editor. The paper of most interest to medical readers is that by Mr. H. N. Banerjee on chemical and physiological investigations on the presence of vitamin C in certain substances in plants. The publishers are Longmans, Green and Co., and the price is 18s.

In response to requests for a short description of the principles and technique of graduated muscular contractions Sir MORTON SMART has published a booklet (Oxford University Press, 2s. 6d.). He hopes that the simple explanation here given will assist those who are interested in this means of treating muscles and joints. He insists that it is harmful to muscles—particularly to those already damaged—to cause repeated contractions and relaxations by methods designed "to control the corepiece automatically."

Another annual review is the French *L'Année Médicale Pratique* (Paris: René Lépine, 28 fr.), now in its sixteenth year under the editorship of Dr. CAMILLE LIAN. This ranges from "abcés de fixation" to "vitamine C," and appears to cover the French medical literature in a thoroughly competent manner.

Reprints of papers on research work from the wards and laboratories of the London Hospital during 1936 have been bound together in paper covers, and the volume is obtainable from Messrs. H. K. Lewis and Co. at 7s. 6d.

The London School of Hygiene and Tropical Medicine has published as a pamphlet of twenty-four pages the report of the tenth meeting of the Industrial Advisory Committee of the Ross Institute held on May 28, 1937.

In preparing a fourth edition of his excellent book, *Common Skin Diseases* (H. K. Lewis, 15s. net), Dr. A. C. ROXBURGH has endeavoured to bring it up to date without materially adding to its size. Four pictures have been replaced by better ones and twenty-six have been added.

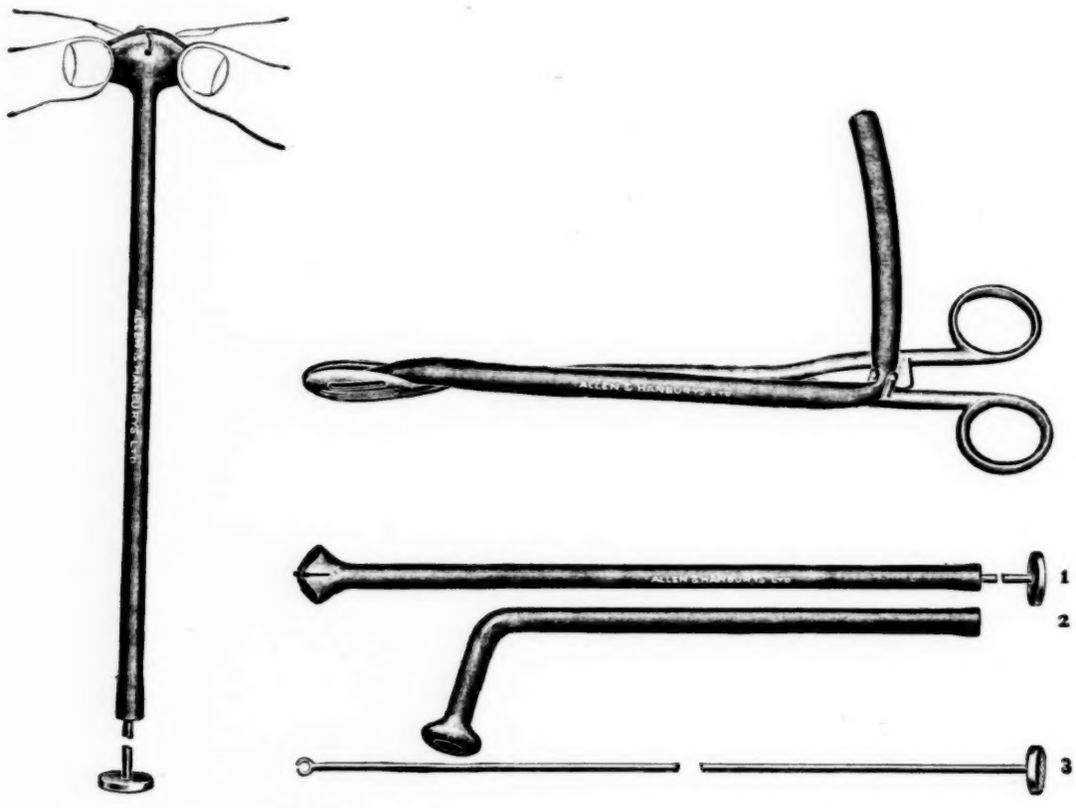
With the twenty-third edition of Sir WILLIAM HALE-WHITE'S *Materia Medica, Pharmacy, Pharmacology, and Therapeutics*, revised by Dr. A. H. DOUTHWAITE, this ever-popular book (published by J. and A. Churchill at 10s. 6d.) reaches its 115th thousand. It now embodies all the essential changes brought about by the publication of an *Addendum, 1936*, to the *British Pharmacopoeia, 1932*. Besides the new official substances the most important drugs now included are benzedrine, digoxin, ergometrine, mandelic acid, histidine, and protamine insulinate.

Preparations and Appliances

FORCEPS FOR INTRODUCING SUPRAPUBIC TUBE

Mr. H. P. WINSBURY-WHITE, F.R.C.S. (London, W.1), writes:

The instrument illustrated is useful for introducing a self-retaining tube of my own design into a suprapubic vesical fistula; it is not, however, suitable when the fistula is very old-standing, and consequently constricted by a good deal of fibrous tissue. After inserting the forceps into the bladder care should be taken to release the outer end of the tube before the blades are opened. It is interesting to note that in the American pattern of this tube as produced to-day the two small holes on the under surface of the expanded end, which were provided to engage the prongs of the original introducer, have developed into two large openings which are quite unsuitable for their original purpose. In fact, the instrument makers on the other side of the Atlantic appear to have no knowledge of the reason for these two apertures, and refer to them as a provision for extra drainage, a function which they could certainly not fulfil to any appreciable extent. Figures 1, 2, and 3 show the tube and original introducer with the tube ready for insertion.



The most convenient method of inserting the prongs into the two holes which should engage them is to stand the introducer upright, so that it rests on its circular flat end. This leaves the two hands free to manipulate the prongs into their respective places. The original modification of the self-retaining tube was first described in the *Lancet* (1922, **2**, 186). The instrument is made for me by Messrs. Allen and Hanburys of Wigmore Street, London, W.1.

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THE PRESIDENTIAL ADDRESS

It is always a pleasure to congratulate the President of the British Medical Association upon the address which he delivers as almost the first official act of his year of office. This can be done quite sincerely because there is never such an address without considerable wisdom and some felicity of expression. It is not invariably the case, however, that these presidential addresses are equally and entirely appropriate either in length or in matter to the particular occasion upon which they are delivered or to the special mixed audience which assembles to hear them. This year it is an added pleasure to recognize that, as in several recent years, the President was successful in holding the attention and interest of his hearers throughout, since both the nature of his subject and his manner of presenting it were attractive not only to the various classes of his medical colleagues but also to that important lay portion of the audience which has to be considered and appealed to on such an occasion. All who heard the address and those who now read it as printed in the opening pages of this issue of the *Journal* will like us to offer congratulations and wish Professor R. J. Johnstone a very successful presidential year.

The main theme of the address was medical education, undergraduate and postgraduate. As a university professor of one of the most important subjects in the medical curriculum, and as an influential member of the General Medical Council, which is charged with the chief responsibility in prescribing that curriculum and has recently given much thought to its revision, the President speaks from practical experience and with the requisite authority. The subject is of prime importance not only to medical practitioners of all kinds but to the general public. To lay administrators, both in central Government Departments and in local health authorities, it seems lately to have presented peculiar attractions, and there is evidence that their judgements and opinions with regard to it are not invariably wise or accurate. Attempts to impose additional requirements upon registered medical practitioners before they shall be allowed to follow their profession in certain directions or within certain fields, in spite of their rights under the Medical Acts, may be wholly mistaken even in respect of the achievement of objects in themselves reasonable and worthy. As the President pointedly said with regard to the health schemes which public authorities are constantly launching one after another: "The administrator has the last word, and while the specialist or whole-time officer is practically immune from criticism the incompetence or carelessness of a few can be alleged as a reason for excluding the whole class of general practitioners from participation in a service." He asks for the rights of all registered medical practitioners to be regarded and conserved, but members of the British Medical Association will be the first to agree that "rights involve responsibilities, and if we are to enjoy the one we must be prepared to the last man to discharge the other."

The methods by which the practitioner may be best equipped for discharging these duties and accepting these responsibilities, and the nature of the opportunities afforded him for so equipping himself, are therefore accepted as matters of supreme importance. Many things can be said, and have been said, on all aspects of this subject, but several points were developed by the President with much clarity and freshness. In a striking passage, contrasting the clinical experience acquired by a trained nurse and that of a medical practitioner, he demonstrated the unique importance of the background of the medical and biological sciences which the medical student laboriously cultivates. "It is the main business of a medical education to provide an adequate background and to teach how it should be used, and the more competently this has been done the more valuable will his clinical experience be to the practitioner." Further, the inculcation of a proper sense of professional responsibility is one of the major objects of medical education: "responsibility to his patients, to his own reputation, and, most important of all, to his own private conscience. The better trained the young graduate the more quickly and more competently does he take up the burden." Again, though the undergraduate must almost of necessity have been taught to think largely like other people, he must also have been encouraged to think for himself, since this, after graduation, should be his chief business. He then "becomes his own teacher and taskmaster." To these ends it is obvious that the skill of the teacher is not only essential but all-important. The President reminds us that "teaching and lecturing are arts that can be learned," and asks, "Would it not be possible that an institution such as the Postgraduate Medical School should give a course in lecturing, and that those who have designs on the teaching posts in our medical schools should be encouraged to take it out?"

The President suggests in conclusion that it is well for the young practitioner to have early in his professional career a period of relative difficulty and struggle, and allows himself just to wonder whether "panel practice is giving him an assured income too soon," and whether it is "taking away the intention to study and to improve the standard of his practice." It is as well that these questions should be asked, for they do hint at a possible danger with a certain type of mind and character; but in general a satisfactory answer can be given to them. No less important than the elements of struggle and emulation is the giving, and even widening, of opportunity, and in a noteworthy sentence the President seeks to assure administrators that "a panel of doctors is just as efficient and reliable as, and gives no more trouble than, a whole-time officer." The whole profession will thank Professor Johnstone for an address which is at once pointed, timely, and wise.

MORE LIGHT—BETTER SIGHT?

Recently, as the result of commercial activity, the slogan "more light—better sight" has become familiar to large numbers of people. In most slogans there is a basis of truth, and where a commercial enterprise concerns medicine it is as well to inquire how much truth is being presented to the public. There has been for some time a drive, originating outside this country, to make the public more "body conscious" in matters of health. How far this is productive of hypochondriacs is a question which would find many and weighty champions on opposing sides. We know that the so-called leisured classes are often the most difficult to cure, whereas as a rule those who have less time to ponder their symptoms respond more readily and completely to treatment. The former rather than the latter class tend to indulge in and support, while it is fashionable, any new health cult, and they will say this is due to their greater erudition and consideration for their bodies. It is doubtful whether they add to the tale of their days by such meticulous care of themselves.

The same is as true of the eyes as of the rest of the body. Thus certain types of over-sensitive or eye-conscious patients require their spectacles to be accurate to an eighth of a dioptre, and inquire as to the best humidity of the room in which reading is to take place; others have difficulty in choosing between lenses of half a dioptre difference and have never heard of humidity. In the Middle Ages it was possible to write and illuminate manuscripts which demanded careful and often very fine work with only rush-lights as an illuminant. Nearer our own time and before the introduction of electricity people could, and did, use their eyes just as much as we do to-day without much difficulty or complaint. Fine work done by the eyes in those days loses nothing in comparison with fine work executed to-day under the most advanced lighting conditions. It is probable, then, that the slogan is in part an outstanding example of good advertising in that it creates a want in the public mind. The difficulty is to determine how much of this want is real and how much is due to suggestion.

The problem of adequate illumination is complicated. The degree of lighting required varies, for example, with the type and quality of work in hand, the error of refraction of the eyes, and the state of health. Other factors, such as the quality and direction of the light, must also be taken into consideration. There is a tendency in the "more light" drive to advise so many foot-candles for reading, so many for sewing, so many for music, etc. Few people are always doing the same work under exactly the same conditions, so that it seems to be unnecessary, except in unusual conditions, to prescribe within narrow limits what illumination is best for any particular patient. Acuity of vision depends upon the contrast in the stimulation of the retinal receptive elements. This obtains more particularly at the edges of the pattern thrown upon the retina. In emmetropia a well-illuminated object with a sharp outline will throw a sharply outlined pattern on the retina. In such a case there is no diffusion of background colour to the pattern, or from the pattern on to the background, and the visual acuity is high. In ametropia and in poor illumination the edge of the retinal pattern is not sharp, and there is interdiffusion between the pattern and the background, resulting in poor vision. This poor vision may be remedied by attention to the focus of the eye and to the illumination. It has been found that the visual acuity, with the focus corrected if need be, rises with increase of illumination up to a certain point. Beyond that point increase of illumination results in a falling off of acuity. The point at which this falling off occurs is difficult of determination, the best illumination depending upon the factors enumerated above.

Experiments made in 1897, which have been accepted as accurate since that date, show that a change in light intensity from 10,000,000 to 1 results in changes of visual acuity of only 20 to 1, and that practically very little increase of acuity is obtained by an illumination of over sixteen foot-candles. The advocates of "more light" are stated to have proved that: (1) Over a wide range of intensity there is a small range at which acuity is at its maximum. Most will agree with this. (2) The maximum acuity occurs at a high intensity.

This does not accord with already accepted data. (3) The range of intensities which produce an observable change in the acuity is large. This does not agree with accepted facts. The chart used for demonstration purposes in the "more light" campaign is shaded from white above to dark grey below. On it are the usual paragraphs in progressively smaller print. The largest print is above on the white background and the smallest below on the dark grey. The smallest print has therefore the least contrast with its background, there being only a difference in light reflection between print and page of about four foot-candles with an illumination of forty foot-candles. The difficulty in the lower region of the card is increased by the glare from the white upper portion when intense illumination is used. The eye is, in such abnormal circumstances, being tested under conditions which rarely obtain in everyday life. The matter has been investigated by the Department for Industrial and Scientific Research, whose publications should be consulted; but before throwing the weight of medical opinion on the side of "more light" careful consideration should be given to the advisability of adding yet one more neurosis to those already complicating the lives of so many of the present generation.

"THE BOOK OF BELFAST"

Belfast has a reputation to sustain in the production of a guide-book for medical visitors. When the British Medical Association paid its first visit to the Ulster capital in 1884 the *Guide to Belfast* written by Dr. Robert Esler and published for the occasion was described editorially in these pages as "the most perfect and handsome" yet issued in connexion with any of the Annual Meetings. To make comparisons is odious, because since then many cities have done excellently in this, as in other evidences of hospitality, but *The Book of Belfast* for the meeting of 1937, edited by Dr. Robert Marshall, will be hard to beat. It is a volume of 160 pages, bound in Irish linen, and is described modestly as an attempt to answer some questions which an interested medical visitor might ask. The answers are given adequately, without being dull even in recounting the history of Belfast's many hospitals. On the cover appears the badge which Dr. R. W. M. Strain has devised for the occasion, and which is reproduced above. It only needs the explanation that the mythological creature, the seahorse gorged with a mural crown, is one of the supporters of the Belfast coat of arms. Dr. Strain reveals himself also as a clever cartographer in a couple of maps, one of Belfast and the other of the six counties, "designed rather for diversion than for direction." On the fly-leaf are printed with fine impartiality two judgements upon Ulstermen. One of them is the remark of the late Lord Rosebery, that the race which has been grafted on to the Ulster stem is "without exception, the toughest, the most dominant, the most irresistible race that exists in the universe at this moment." If this sounds a trifle extravagant it is countered at once by John Milton's denunciation that they are "egregious liars and imposters," but the judicial mind was not a characteristic of Milton's genius. Dr. Marshall has been able to draw upon a great deal of local talent and erudition, from the Lord Mayor downwards, and the contributors include several well-known names in Belfast academic and industrial life. After a brief description, not without pride, of the topography of the city and port of Belfast, some forty pages are devoted to the Belfast Medical School and its founders, especially James McDonnell (1763-1845), of whom Malcolm, in his *History of the Royal Hospital*, writes, "No contemporary of any note in Britain was ignorant of his profound learning and distinguished name." Other names are Thomas Andrews, first holder of the chair of surgery in the Royal Belfast Academical Institution (of which the medical school become a department in 1835), and Henry McCormac, first professor of medicine, whose son, Sir William McCormac, was for five years president of the Royal College of Surgeons of England, and whose grandson, Henry McCormac, physician to the skin department of the Middlesex Hospital, is opening Thursday's discussion in the Section of Dermatology. Another chapter of the book describes the beginnings of Queen's College, later the Queen's University, in 1845. There are chapters recording the history of the Ulster Medical Society, founded in 1862, and the formation of the Northern Ireland Branch of the British Medical Association in 1878, followed by the two Annual Meetings in Belfast in 1884 and 1909. From this point the volume follows more closely the ordinary guide-book pattern, describing places of interest to be found in Belfast and its neighbourhood, the local industries, and the facilities for motoring and sport. Professor J. Kaye Charlesworth writes on the geology of Ulster, Mr. J. S. Loughridge on its archaeology, and the Rev. W. F. Marshall explains the accent and idiom which strikes a little strangely on the ear of the visitor from across the Irish Sea. The many illustrations add to the pleasure of the book, giving a better idea of old Belfast and some of its medical worthies. Among reproductions are the cartoons which decorated the programme of a special entertainment organized by Professor Johnson Symington for the delectation of Lord Lister when he visited Queen's to open the new physiology laboratory in 1897. In addition to the figure of a coroneted Lister slaying the dragon, there are lifelike sketches of the two former Belfast Presidents of the British Medical Association, Professor James Cuming and Sir William Whitla, the one as an Egyptian priest and the other as an itinerant musician. Dr. Marshall and all concerned deserve congratulations on a piece of literary work to serve as a memento of a meeting which bids fair at the moment of writing to be one of the most successful and pleasurable of recent years.

ORGANIZATION OF THE VETERINARY PROFESSION FOR CONTROL OF ANIMAL DISEASES

For many years the veterinary profession has been chafing under the rather ineffective and disorganized efforts that have been made by the country to control the diseases of animals generally, and cattle in particular. The National Veterinary Medical Association in 1935 appointed a committee to consider fully the lack of co-ordination of these efforts, their disastrous effects upon the work of the veterinary profession, and the best way of reorganizing their services so that a comprehensive and co-ordinated attack upon animal disease might be instituted. A pamphlet giving the results of these deliberations in full has been published by the Association (36, Gordon Square, W.C.1), and the subject-matter will be found to be particularly apposite to the terms of the Agriculture Bill at present before Parliament. The main recommendations of the profession have already been adopted by the Government, and a centralized veterinary service for the whole of Great Britain, making use of the wide experience of the veterinary practitioner in agricultural districts, is to be inaugurated. The recommendations allow for the development of this service and visualize the gradual establishment of several specialized branches within the comprehensive national service. These various branches are to be directed by a principal veterinary officer, who must be himself directly responsible to the Minister. The report emphasizes that unless the principal veterinary officer has direct access to the Minister, then the status of the professional service will be lowered and there will be grave danger of the scheme making far less headway than is desirable. Up to the present, however, the Government has not seen its way to agree to this increased status which the veterinary profession regards as essential.

EXPERIMENTS ON ANIMALS IN 1936

As was the case last year, the recently issued Home Office return relating to experiments on living animals records an increase in the number of experiments performed. The total figure for 1936 was 822,167, including 36,540 experiments carried out with anaesthetics, and 785,627 experiments comprising inoculations, hypodermic injections, and other proceedings performed without anaesthetics. The aggregate exceeds that of 1935 by 85,451. The return states that in no case had a certificate dispensing entirely with the use of anaesthetics been allowed for any operation more severe than subcutaneous venesection. Except in certain experiments dealing with the efficiency of antiseptics the regulations demand the use of full antiseptic precautions in order that wounds may heal as painlessly as possible. During the year forty-two licensees performed 33,507 experiments in the course of cancer investigation. 6,130 of these were operations requiring anaesthetics; the remainder were almost entirely inoculations into mice or exposure of animals to radiations. Three hundred and twelve licensees performed over 164,000 experiments for Government Departments and other public bodies, including, among many others, the League of Nations, the Commonwealth Government of Australia, and the Crown Agents for the Colonies. In addition more than 323,000 experiments were carried out in the course of the preparation and testing of antitoxic sera and vaccines and for the testing and standardizing of drugs. The inspectors, whose number was increased to three by the appointment of Dr. G. H. Culverwell in May, 1936, made 933 visits to registered places during the year, in most cases without previous notice, and witnessed a number of experiments. Only three cases of irregularity were reported; the offenders were admonished.

HORMONE TREATMENT OF UNDESCENDED TESTES

It is now seven years since Schapiro introduced hormone treatment for undescended testes, and during this period the consensus of opinion, as judged by the published reports, is that the results are encouraging. A. J. Cramer,[1] and W. O. Thompson, A. D. Bevan, and their collaborators,[2] have recently reviewed the published cases, and find that of the total number treated descent occurred in 72 per cent. The results obtained, however, in their own series of cases and the conclusions reached are widely different. Cramer gave twenty cases (ten bilateral and ten unilateral) 100 rat units of antuitrin S twice weekly for varying periods up to two months. Descent of both testes was brought about in seven and of one testis in one of the bilateral cases; of the unilateral cases descent was effected in six. He concluded that hormone treatment is a valuable method of therapy for undescended testes, and that when surgical measures are indicated the results may be enhanced by hormone therapy as an adjunct. Thompson and his collaborators treated eighteen boys between the ages of 1½ to 17 years (three bilateral and fifteen unilateral). The preparation used was follutein, and the dose was usually 200 rat units three times a week for an average of five months. Descent occurred in only four cases: of these three were unilateral, two being of migratory type, and in one of these the testis returned to the inguinal canal when treatment was stopped. In the bilateral case only one testis descended, although treatment was continued for eight months. Seven of the patients in whom descent failed to occur were later operated upon, and in each instance anatomical factors preventing descent were found at operation. They observed, however, that pre-operative administration of gonadotropic substance caused definite stimulation of genital growth, and this seemed to make surgical procedures less difficult. These conflicting results are not easy to reconcile. It is quite probable that many of the successful cases reported in the literature were of the migratory type, which descend spontaneously and which respond easily to hormone treatment. A. D. Bevan is of the opinion that the reports of the power of gonadotropic substance to produce rapid descent in a large percentage of cases are

[1] *Endocrinology*, 1937, **21**, 230.
[2] Ibid., p. 220.

exaggerated, but that as he has seen no evidence of injury the method should be given a fair trial; if after six months' hormone therapy no change takes place operation should be performed. The author's impression is that the problem will be thoroughly understood only after more careful attention is given to all the embryological and anatomical factors. Diagnosis and choice of case are important, and yet it is often extremely difficult to be sure clinically whether descent is prevented by mechanical factors. Careful recording of operative findings in all cases in which descent fails to occur after administration of gonadotropic substance will be of considerable value.

VASCULAR CHANGES AFTER SYMPATHECTOMY

Earlier this year[1] we commented on recent experimental work undertaken to elucidate two of the more striking and obscure phenomena observed after sympathectomy in man—namely, the gradual regain of tone of the denervated vessels and the more favourable results of operations on the lower than of those on the upper limb. More recently Ashcroft[2] has published studies of the effects of interrupting at various levels the sympathetic pathways to the upper and lower limbs of the rhesus monkey. Hemisection of the spinal cord above the sympathetic outflow, section of the anterior roots, or division of the preganglionic or of the postganglionic sympathetic fibres is followed within the first few hours by intense vasodilatation in the relevant limb. At this stage the sympathectomized vessels react normally to adrenaline and the temperature of the limb exposed to cold falls no more than is to be expected from increased cooling; the changes at this early stage are independent of the level at which the sympathetic impulses are interrupted. As time elapses the vasodilatation becomes less intense and the denervated vessels begin to react more strongly to constrictor agents. The degree of this enhanced reactivity appears to be more or less inversely proportional to the number of cell stations between the point of intervention and the vessels themselves. Thus, several days after cervico-dorsal ganglionectomy the sympathectomized hand cools considerably when exposed to cold, whereas at a similar stage after division of the sympathetic nerves proximal to the third thoracic ganglion the sympathectomized hand remains warm when the air surrounding it is cooled. Again, the vessels of a hand deprived of its postganglionic fibres constrict to a dose of adrenaline only one-tenth of that required to produce an appreciable vasoconstriction in a normal hand; after preganglionic section the increase in sensitivity to adrenaline is but three times the normal. Increased sensitivity to certain agents after denervation is of fairly general occurrence—for example, of the pupil and the nictitating membrane of the cat to adrenaline. Increased sensitivity to choline esters has been described in voluntary muscle after division of the motor nerve, and has been demonstrated by Ashford in the sympathetic ganglia after preganglionic section. The change presumably occurs in the peripheral structures themselves, but its exact nature remains undecided. The importance of Ashcroft's work is that it demonstrates in the monkey, as previous workers have demonstrated in man and in the rabbit, that regain of tone and gain of reactivity in sympathectomized vessels are greater after post- than after pre-ganglionic section. It therefore emphasizes once more the desirability of preganglionic rather than of postganglionic section as the operation of choice for producing persistent vasodilatation in man.

[1] *British Medical Journal*, 1937, **1**, 1076.
[2] *Brit. J. Surg.*, 1937, **24**, 787.

THE NEW D.P.H. RULES

The resolutions and rules made by the General Medical Council for diplomas and degrees in sanitary science, public health, or State medicine are revised and modified from time to time with a view to the Council being assured that those degrees or diplomas "have been granted under such conditions of education and examination as shall ensure the possession of a distinctively high proficiency, scientific and practical, in all branches of study which concern the public health." In view of the special statutory privileges accorded to the holders of such decrees or diplomas, and of the increasing national importance of the public health service to which these holders may secure admission, the maintenance of a really high standard is necessary and a periodic strengthening of the requirements of both educational course and examination tests is reasonable. The recent revision of the rules has been definitely in this direction, and, as the new rules are to come into operation on October 1, 1938, careful attention should be given to them by all senior medical students and qualified practitioners who contemplate taking the prescribed course and entering the public health service either temporarily or permanently. Several of the changes made are of particular importance. Candidates, as at present, must have possessed a qualification in medicine, surgery, and midwifery for not less than two years; but in future this need not be a registrable qualification, so that persons holding certain Colonial, Dominion, or foreign degrees will not be debarred from obtaining the D.P.H. The diploma, however, cannot be registered apart from some other qualification which has already been entered on the *Register*. The requirement that the candidate shall have attended instruction for a definite number of hours is to be less rigid, the prescribed hours being related to the length of the course and not to the attendance of the student; but such attendance must have been "satisfactory and regular." The subjects of instruction and for both parts of the examination, too, are so stated as to permit a somewhat increased freedom in their treatment and the elimination from them of certain chemical analyses and other matters which experience has proved to be unnecessary; but certain additions have been made in connexion with genetics, mental hygiene, and hospital and mental health services. The most important point for intending candidates to note, however, is that part-time study during the whole of the course is not, after the appointed date, to be recognized. During the twelve months over which the D.P.H. curriculum usually extends there must be a period of "not less than three consecutive calendar

months devoted to the whole-time study" of the subjects necessary for the first part of the examination. This provision may not be accepted without some demur, and it will affect a not inconsiderable number of students; but it should, on the whole, be regarded as a reasonable requirement, tending to make the general course of study for the diploma more thorough and its pursuance more serious than it has occasionally been in the case of some students or institutions in the past.

HEALTH PROBLEMS IN SHANGHAI

The annual report for 1936 of the Public Health Department of the Shanghai Municipal Council is admirably lucid and informative. It states that the incidence of typhoid fever is a source of anxiety to the Department. The continued prevalence of this disease, despite the gradual improvement in sanitation, is attributed to the consumption of fruit and raw vegetables without observing the precautions which are necessary in a land where human excrement is employed in cultivation. Malaria, which has been increasing steadily since 1927, also presents a difficult problem. It is thought that, following the opening of new roads, anophelines infected with the parasites of the malignant form are conveyed by motor traffic from outlying districts into the central areas, which previously had been almost free. As a result anti-malarial measures have been intensified and mechanized attacks with new and deadlier forms of larvicide have been organized. Efforts are also being made to destroy infected mosquitos in houses where malaria has been contracted or cases are being nursed, a procedure which has met with much success in South Africa. With regard to the incidence of malaria during the year, this increased by nearly 50 per cent.; 298 cases were diagnosed, as against 202 in 1935, while *P. falciparum* was found fourteen times, as against seven. Some cases of *P. falciparum* infection were apparently of local origin, though the majority were probably contracted during visits to surrounding areas where malignant tertian malaria is endemic. Only one type of anopheles, *A. hyrcanus* var. *sinensis*, is found in Shanghai and its immediate environs. Information is desirable as to what extent, if any, this insect acts as a vector of *P. falciparum*. In view of the relatively low incidence of malignant tertian compared with benign tertian in Shanghai this insect does not seem to be a potent factor in the spread of the former type of malaria.

JOURNAL OF THE IRISH FREE STATE MEDICAL UNION

It is just two years since negotiations between representatives of the Irish Medical Association and the Irish Committee of the British Medical Association resulted in a plan for the establishment of the Irish Free State Medical Union (I.M.A. and B.M.A.), an autonomous and independent body which would be truly representative of the medical profession in the Irish Free State. Some idea of the success of the Union in its avowed object of "promoting the medical and allied services and maintaining the honour and interests of the medical profession" has been given by the reports of council and other meetings that have appeared in our *Supplement* from time to time. Now to promote this object still further comes the first number, dated July, 1937, of the Union's monthly journal, one of the main duties of which, as stated in the opening editorial, will be to keep members informed of the work the Union is actually doing on their behalf. It will be remembered that the constitution of the Union provides that each member shall receive the *British Medical Journal* each week, and it is therefore emphasized, in the editorial already referred to, that the *British Medical Journal* remains for members the medium through which they will keep abreast of recent developments and progress in medical science and of the medico-political problems that confront the profession in other countries. The *Journal of the I.F.S. Medical Union*, on the other hand, will make public as fully as possible the proceedings of its council and of various committees, report the steps taken to put the claims of the profession before the Free State Government and local authorities, and, as occasion offers, publish articles discussing problems that concern the profession as a whole. It is also hoped to make it a medium for the free expression of opinion. The first issue contains, in addition to the editorial statement of the services our new contemporary hopes to render to members, much that is of importance to medical men in the Irish Free State—for example, some comment on local Garda authorities and the appointment of medical attendants, the retirement of dispensary medical officers, emergency dispensary leave, reports of the annual meeting and of the council meeting on May 13 last, and the terms of appointment to the dispensary service in Northern Ireland. It also contains an account of the National Eye Service as it operates in England, and an appeal for the co-operation of members in the establishment of a similar service in the Irish Free State.

THE HALF-YEARLY INDEXES

The usual half-yearly indexes to the *Journal* and to the *Supplement* and *Epitome* have been printed; they will, however, not be issued with all copies of the *Journal*, but only to those readers who ask for them. Any member or subscriber who wishes to have one or all of the indexes can obtain what he wants, post free, by sending a postcard notifying his desire to the Finance Department, British Medical Association House, Tavistock Square, W.C. 1. Those wishing to receive the indexes regularly as published should intimate this.

The proprietors of the *Lancet* have appointed Dr. Egbert Morland as Editor in succession to the late Sir Squire Sprigge. Dr. T. F. Fox and Dr. M. H. Kettle have been appointed Assistant Editors.

The Australasian Medical Congress (British Medical Association) will hold its fifth session at Adelaide from August 23 to 28.

ANAESTHESIA IN GENERAL PRACTICE

This is one of a series of articles, contributed by invitation

RECENT ADVANCES IN ANAESTHESIA

BY

J. BLOMFIELD, O.B.E., M.D.

Anaesthetics as we know them to-day may be said to have started at the period which followed the war, so great an effect did the experience in casualty clearing stations and base hospitals for plastic operations have on the practice of anaesthetists. The contrast between pre-war and post-war anaesthetics is striking. Former practice was almost limited to the administration of ether or chloroform for long operations and of nitrous oxide or ethyl chloride for short ones, in addition to the employment of spinal and regional methods. Prolonged administrations of gas and oxygen were unknown in ordinary practice, and ethylene and cyclopropane had not yet appeared as anaesthetics. To-day, beside these gases, we have vinethene, the various barbiturates used intravenously, several means of basal narcosis, improved methods of spinal and epidural analgesia, and the methods of endotracheal administration.

The defects of both ether and chloroform had long been apparent. The latter was thoroughly well proved to be potentially too dangerous for a routine anaesthetic, and ether, though safe on the table, was guilty of unpleasant as well as risky after-effects. Chloroform is now mostly relegated to certain operations on the upper air passages and to midwifery. Ether is still largely used and is still a valuable anaesthetic, but its chief mode of employment in major surgery is now supplementary. It is given not as the sole or the chief agent but to strengthen when necessary the innocuous nitrous oxide, which has become the chief anaesthetic for long operations. The possibility of using nitrous oxide in this manner is solely due to improvement in the machinery of administration, and for this improvement we have to thank the Americans, and most of all the late E. I. McKesson, who had already in 1910 devised his first gas-and-oxygen machine. During the war the great advantage which nitrous oxide offered over toxic anaesthetics in many critical cases became so obvious that British medical men acting as anaesthetists at the front were led to devise and use machines capable of giving prolonged administration of the gas in a way which had not been possible with the Hewitt type of instrument, up to that time the only gas-and-oxygen machine in common use in Great Britain.

Basal Narcosis

In civil surgery it soon became apparent that there were many major operations, especially abdominal ones, for which the anaesthesia of nitrous oxide unaided was insufficient. War experience had in fact led to an overestimate of the utility of the gas. Nevertheless its advantages as an innocuous and non-poisonous agent remained undisputed, and the object now was to render it more widely efficient. This led to the premedication which is so notable a feature of present-day anaesthetics. It was found that by supplementing atropine, which was the general routine drug given before operation, if any was given at all, by a combination of this with morphine in full doses, or by using omnopon and scopolamine, then the subsequent administration of nitrous oxide and oxygen could be effective, although for abdominal relaxation in difficult subjects considerable quantities of additional ether might still be required. The advent of avertin for the production of what now became known as "basal narcosis" still further extended the possibilities of nitrous oxide. Paraldehyde was similarly administered per rectum. The idea of rendering the patient comfortably drowsy, or actually unconscious, before he left his bed found favour rapidly. The great advantage which such a method has from the psychological standpoint when timid or nervous patients are concerned needs no demonstration.

Later still the production of hypnotic drugs belonging to the barbituric-acid group extended the anaesthetist's choice of preliminary narcotics. Pernocton, much used on the Continent, never found great favour here, but nembutal, both by the mouth and intravenously, is widely employed. Sodium amytal is warmly recommended by some, particularly for obstetrics; evipan intravenously and pentothal are extensively employed to induce unconsciousness before the main anaesthetic is brought in, or, in short operations, as the sole anaesthetic. The rapid action and freedom from all discomfort during induction which are provided by the last two agents have brought them rapid popularity, and it is sometimes overlooked that they cannot be safely regarded as the equals of nitrous oxide from the point of view of innocuousness. The intramuscular injection of evipan to supplement the intravenous injection is likely to lead to local trouble, and at least one fatality due to this procedure has been recorded.

New Inhalational Anaesthetics

While the various drugs and methods to which we have just alluded extended the scope of nitrous oxide and other gases weaker than ether vapour, the latter still remained the routine agent for much major surgery in general practice, and some specialists, valuing the safety on the table and the general efficiency of ether, sought to find out the cause and the means of preventing those unpleasant after-effects which are the great drawback to its general use. It was shown that injection of insulin before and after operation had an effect on the occurrence of toxic symptoms due to ether. It was claimed, moreover, that ether could be made the ideal anaesthetic if due attention were paid to the right bodily state of the patient beforehand, to premedication, the employment of oxygen, routine removal of endotracheal mucus by suction, and the administration of intravenous saline. The patient, according to those who advocate ether in this way, is kept for a week before operation on a meat-free high carbohydrate diet, with abundant vitamins and extra lactose. German authorities claim that with supersaturated ether vapour they abolish most of the deleterious effects of inhalation of this drug, making it unirritating to inhale and not nauseating.

Vinethene, divinyl ether, which was first shown to have anaesthetic powers in 1930, has since proved of great clinical value. Its anaesthetic potency is no less than four times as great as that of ordinary ethylic ether and is greater than that of chloroform. It acts rapidly and has been most valuable in midwifery and as a supplement to nitrous oxide. It is so volatile that it cannot well be given except from some closed form of apparatus, but with this method care has to be taken that there is

sufficient dilution with oxygen or air. Overdose leads to respiratory paralysis, and very long administration may impair the liver.

Cyclopropane, the other recently introduced inhalational anaesthetic, is also a potent gas, the value of which is enhanced by the free dilution with oxygen in association with which it is effective. For this reason it is much employed for the operations of major thoracic surgery. In connexion with cyclopropane mention must be made of the modern technique of carbon-dioxide absorption. For one thing this technique alone renders possible the free use of so expensive an agent as cyclopropane. Its economic value is, however, not the greatest of the advantages of the technique. This lies in the complete control of respiration which the method affords. The administration of carbon dioxide itself in anaesthesia is a modern feature. The physiologists have taught us that it is the natural and most efficient stimulant for the respiratory centre. Consequently it is now commonly employed to hasten induction of anaesthesia by amplifying the breathing and also to facilitate recovery by increasing the rapidity of elimination of the anaesthetic.

While technique is under discussion reference must be made to that which has done more to alter modern methods as compared with their predecessors than any other one factor. This is the introduction of endotracheal anaesthesia. The bugbear of the anaesthetist of the past was most often spasm and congestion of the tongue and upper air passages. Introduction of a catheter through the larynx into the trachea entirely does away with this difficulty. The method, in the words of Magill, whose work in this connexion has been invaluable, "prolongs the trachea" to the mouth. Moreover, this method of introducing anaesthesia has rendered possible some thoracic operations which without it would be barely possible, and has greatly facilitated operations, such as those on the cerebellum, when a prone position of the patient is necessary. Also for operations on the upper abdomen on difficult subjects endotracheal methods are often the best possible solution of the problem. Mention, too, must be made of the long and repeated operations of plastic face surgery, the requirements of which first stimulated the development of endotracheal methods in this country.

Intravenous Methods

Intravenous injection of anaesthetics was tried in many instances about twenty-five years ago. The agents employed were ether, hedonal, and isopral. The first was abandoned because it was found that the large amounts of weak solution needed were excessive and there was danger of waterlogging the lungs. Nor did the other two prove satisfactory enough for them to come into general use, chiefly because of the long unconsciousness after operation. Recently, however, the intravenous method has been reintroduced with much greater success. Good results have been recorded with ethyl alcohol infused along with glucose solution, but the best agents for intravenous anaesthesia are pentothal, evipan, and nembutal. Eunarcon, another barbiturate, gives good anaesthesia for short periods of time. Although the other barbiturates mentioned are suitable for short operations as the sole anaesthetic they are also largely given as precursors to long anaesthesia with other agents; in some hands they are themselves employed as the main anaesthetic for long operations, and for this purpose various instruments have been designed which allow the hollow needle to remain *in situ* in the vein.

To what extent intravenous will supersede inhalational methods it is at present too early to state with confidence, nor have we probably yet arrived at the best possible drug for the purpose. Allusion may be made here to the practice of injecting morphine into the vein, an effective mode of prolonging the anaesthesia of evipan, or other barbiturate, when it is waning.

Spinal Analgesia

One of the chief drawbacks to endothecal methods of analgesia used to be the comparatively short time which could be relied on for effective insensibility. The introduction of percaine, a quinolin salt, a body entirely different chemically from those hitherto employed endothecally, removed this objection. The work of the late Howard Jones put administration of this drug on a scientific basis, and his excellent clinical results are now widely imitated. Some observers have pointed out the importance of warming the solution to body temperature before injecting it. There are still considerable differences of opinion as to the physiology of spinal analgesia and as to the reasonableness or the opposite of producing in this way anaesthesia of the upper portions of the body. It is true that anaesthesia even of the scalp has been successfully obtained, and that tonsils have often been removed with the help of analgesia procured by endothecal injection, but the consensus of opinion is still in favour of limiting spinal methods to regions below the level of the umbilicus as a general rule.

The chief danger of endothecal injection is ascribed to the fall in blood pressure which is associated with it. Controversy still rages over the manner in which this is brought about. Opinion on the whole seems to favour the view that the drop depends on the number of constrictor nerve fibres which are paralysed by the injection, and that the intercostal paralysis and respiratory depression play only a secondary part. Much experimental work has been carried out to determine this question and to ascertain the degree to which absorption of the injected drug takes place into the blood stream, and whether this is in clinical practice a point of real import. It is generally held that respiratory paralysis occurring during endothecal analgesia is never primary through direct action of the drug on the bulb, but is due to secondary stoppage of the breathing through insufficient blood supply owing to excessive fall of blood pressure. Much difference of opinion has been expressed, too, as to the causation of headache, which is sometimes severe after spinal puncture. The treatment most recommended is to keep the patient's head low for twenty-four hours after return to bed. Spinal methods have recently been introduced with striking success into thoracic surgery when lobectomies and other grave intrathoracic operations have to be performed. The injection of ephedrine, of adrenaline, and of icoral is recommended by different authorities as a certain corrective or preventive of fall in blood pressure.

Mention must be made here of a form of spinal analgesia which has not yet been much tried in this country but has had enthusiastic support on the Continent and in America. It is epidural anaesthesia, and depends on injection made, not into the cerebro-spinal fluid as in ordinary spinal analgesia, but into the small layer of loose tissue outside the dura. The method is thus allied to sacral analgesia, when the injection is into the sacral hiatus and again does not involve the cerebro-spinal fluid. This technique has been much used for perineal operations, for which it is excellent.

Splanchnic analgesia—placing a block across the path of impulses passing from the viscera via the coeliac ganglia and the great splanchnic nerves to the central nervous system—has proved of great service in severe operations on the upper abdomen. It is mostly employed in combination with light general anaesthesia, or with basal narcosis, or a field-block of the abdominal wall. This form of anaesthesia has certainly made possible severe and prolonged operations on subjects who could not possibly have survived them otherwise.

Therapeutic Use of Anaesthetics

Several anaesthetics have been of service in a manner entirely different from that for which they were designed. Avertin has been invaluable in the treatment of tetanus, and has been shown to be without deleterious or toxic effect though injected on a large number of occasions at short intervals of time. Evipan has been given with success in the control of delirium tremens, and the barbiturates generally have been found of help in the treatment of mental cases, especially when prolonged narcosis is desired. Finally, it has been maintained that the good results sometimes following the mere opening of the abdomen—for example, for tuberculous peritonitis—are to be attributed not to the operation but to the anaesthetic inhaled, and it has been suggested that repeated inhalations without operation would be a beneficial form of treatment.

No survey of advances in anaesthetics should conclude without allusion to the improvements which have taken place within the last few years in the education and the professional status of anaesthetists. This is well illustrated by the recent institution of a diploma in the subject by the Royal Colleges of Physicians and of Surgeons, this diploma being to a large extent due to the instigation of the Association of Anaesthetists of Great Britain and Ireland, the existence of which body is itself an evidence of the increasing importance which is being given to the practice of anaesthetics as a specialty. Lastly, the first Chair of Anaesthetics in Great Britain has recently been instituted in the University of Oxford through the munificence of Lord Nuffield.

R. D. Evans (*Amer. J. Roentgen.*, March, 1937, p. 368) has found that about 45 per cent. of the total amount of radium stored in the skeleton in cases of chronic radium poisoning gives rise to radon in the expired breath. The amount of radon, and consequently of the radium producing it, can be determined by electrical tests on the expired air. The rest of the radium in the body is determined by the gamma rays produced by its decay product, radium C. Very sensitive quantum-counters, capable of detecting radiation from less than a millionth of a gramme of radium, permit more rapid determination of the radium C gamma rays from a living person than do the usual electroscopes. The author then describes a general method for estimating the extent to which a gamma ray gives off substance in a closed and inaccessible container. The quantum-counters are directly calibrated for rapid measurements of radium C. The rate of the loss of radium by the patient is directly measured by radium analyses of the faeces and urine. In chronic cases 0.005 per cent. a day is eliminated, 91 per cent. of this in the faeces and 9 per cent. in the urine. The mobilization of radium within the body is studied by radon analysis of specimens of alveolar air. Simple gamma-ray examinations of patients will detect chronic radium poisoning five or ten years before any clinical symptoms appear.

RHEUMATIC HEART DISEASE IN THE COUNTY BOROUGH OF DEWSBURY

BY

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The following statistics obtained at a recent survey of school children known to have suffered from cardiac disease may prove of interest. It should be pointed out that the figures refer to the numbers of children whose cardiac debility was of such a degree as to interfere with their normal mode of living to some extent, and is in no way intended to be a reflex of the total incidence of rheumatic disease in Dewsbury. These cases are listed in the school clinic records as heart cases to be examined for the purpose of determining whether they were suitable for attendance at the public elementary school, and whether or not they had recovered sufficiently to lead a normal existence.

The first table shows the classification of these cases according to fitness.

TABLE I

	Males	Females	Total
Number of children fit for public elementary school and for some exercises, but recommended for further observation	4	–	4
Number fit for P.E.S. but excluded from games and exercises	10	6	16
Fit for P.E.S. half-days. Excluded games	–	1	1
Unfit for P.E.S.	1	4	5
At open-air school	1	2	3
			29

Table II shows the number of cases suffering from heart disease directly attributable to rheumatism in some form or other. The other heart cases attributable to such diseases as pneumonia, diphtheria, etc., are classified together as non-rheumatic.

TABLE II

	Males	Females	Total
Heart debility due to rheumatism	12	8	20
Heart debility not due to rheumatism	5	4	9
			29

It is noted, then, that the majority of cases of heart debility are directly the result of rheumatic disease, in the proportion of two to one. In twenty-six of the cases the tonsils were found to be present and enlarged and ragged, or cryptic or otherwise unhealthy. It was ascertained whether or not each case had had the tonsils removed prior, or subsequent, to the onset of heart disease, and the following table is instructive:

TABLE III

	No. of Cases
Tonsils present on examination	26
Tonsils removed	3
Tonsils removed prior to onset of disease	Nil

It will thus be seen that all of these cases had their tonsils intact before the onset of heart disease.

It was next decided to investigate the incidence of these heart cases according to the district in which the patient lived, and it was found that twenty-one lived in the town centre and eight in the outlying districts. Of the twenty-one cases in the town centre fourteen were of rheumatic origin. An analysis of these fourteen cases showed that thirteen of them belonged to the most congested part of the town centre.

The cases were then analysed with a view to discovering what schools contributed most cases, and it was found that seven of these thirteen cases came from the two schools serving the most poverty-stricken and congested area of the town. Another interesting point made out was that only four out of the total of twenty-nine cases lived in the end of the town where are housed almost all the mills, and which might be regarded as the most smoke-laden

part of the town. Table IV shows the incidence of these cases according to the age groups 5 to 9 years and 9 to 13.

TABLE IV. INCIDENCE ACCORDING TO AGE GROUPS

(1) Of all Heart Cases

Age Groups :	Males	Females	Total
5–9 years	4	5	9
9–13 „	11	9	20
			29

(2) Of Rheumatic Heart Cases

Age Groups :	Males	Females	Total
5–9 years	3	3	6
9–13 „	8	6	14
			20

It will be seen from Table IV that six patients suffered from heart trouble in the years immediately following admission to school, and of the fourteen remaining cases it was found that the majority of them gave a history dating back to the age group of 5 to 9 years, and seven of them could be traced back to age 5 or 6.

Commentary

These few results tend to substantiate the theory that rheumatic heart disease in children is a result of infection of the tonsils and that such infection occurs early in the child's school life.

In the majority of cases the rheumatic manifestations were not dramatic, and consisted mainly of indefinite pains of the limbs and joints rather than an obvious attack of rheumatic fever. Of the twenty cases of rheumatic heart disease only five gave a history of rheumatic fever or chorea.

It would appear that the most important examination from the child's point of view is not the one subsequent to school attendance, but one which should be made during the "toddler" stage. Thus an argument can be made out for the routine medical inspection of children attending nursery schools, as it is here that the full effect of preventive removal of tonsils can be gained. The findings certainly suggest this interesting conclusion, although the limited nature of the survey will not allow of a dogmatic statement.

It has been my experience that in too many instances tonsils have been removed merely because they were enlarged, and in too many instances the tonsils were left in spite of symptoms merely because they were not enlarged. The potentiality of the tonsil to lodge the streptococcus and the patient's symptoms, be they ever so indefinite, are of much more significance, and should in no case be neglected.

I have to thank Dr. J. F. Galloway for permission to publish these results.

At the last quarterly court of the directors of the Society for Relief of Widows and Orphans of Medical Men, with Mr. V. Warren Low, president, in the chair four new members were elected. A donation of £4 15s. had been received from the London Panel Committee, and £2,413 15s. was voted for payment of the half-yearly grants to widows and orphans in receipt of relief. The widow of a member recently deceased applied for relief, and the court voted her a yearly grant of £50 from the ordinary funds and one of £25 from the Brickwell Fund. There are now sixty-one widows in receipt of grants, the largest total since the foundation of the society. A subcommittee was appointed to consider the best method by which to celebrate the 150th anniversary of the foundation of the society next year. The directors desire to bring to the notice of young medical men the great advantages of membership, which is open to any registered medical man who at the time of his election is resident within a twenty-mile radius of Charing Cross. Relief is only granted to widows and orphans of deceased members. Full particulars and terms of subscription may be obtained from the secretary, 11, Chandos Street, Cavendish Square, W.1.

COMMERCE WITHOUT CONSCIENCE

DANGERS OF PATENT MEDICINE ADVERTISING

The first aim of the advertiser is to ensure that his message will be read by the greatest possible number of people of the class to which it is directed. If this object is to be achieved the advertisement must have some quality which will enable it to divert the reader's attention from numerous competing announcements; and of all the devices used for this purpose none is more effective than the topical illustration or headline. This fact is so well known to the advertising profession that Boat Race Day, for example, would not seem complete without the appearance in the public press of numerous drawings of the contending crews, illustrating more or less appositely a variety of appeals quite unrelated to university athletics. The water that flows between Putney and Mortlake may not immediately suggest a certain modified water prepared in Edinburgh, but there is no doubt that the "Younger Every Day" slogan, if accompanied at the right moment by a picture of Father William at the oars, will attract much wider attention than it would otherwise receive.

Topicality and the Appeal to Fear

But an advertisement, if it is to serve any purpose useful to the advertiser, must not only be read; having been read it must stimulate the reader to action. Now the publicity expert, whether or not he can claim acquaintance with academic psychology, knows that the surest way of influencing the behaviour of men and women is by exciting one or more of those primitive emotions which we have inherited from our subhuman ancestors and which, despite our pride in our exalted rationality, remain the driving forces of our lives, the "springs of conduct." And of human emotions few are so powerful as the emotion of fear. Happy is the advertiser whose prospective clients, puppet-like, can be roused to action by the tugging of this simple string.

The recent bus strike in London produced a crop of patent medicine advertisements in which topicality and the appeal to fear were cunningly combined. The strike was one which closely affected the daily lives of millions of men and women, whose attention was therefore readily captured by any conspicuous reference to the event in the daily newspapers; and these same millions were aware of the strikers' claim that their conditions of work were conducive to nervous and digestive troubles. The manufacturers of nostrums for these disorders were not slow to see in this situation a good opportunity to increase the pulling power of their advertising. There was published, for example, an advertisement in which, below the bold heading "Bus Conductor's Eight Years' Indigestion, Nerves, and Sleeplessness Ended at Last," appeared a picture of the one-time victim (now smiling happily at the reader from the deck of his vehicle) together with an account in his own words of how, after he had "tried indigestion remedies without number," a particular brand of tablets finally cured his "terrible agony." Another announcement, advertising a different specific, began with the startling assertion, credited to a London bus driver, that "three out of every four bus drivers and conductors suffer from gastric trouble." A third, while making no direct reference to the busmen, included a timely dissertation on the danger to the digestive system of the rush of modern life ("Hurried meals, irregular hours, nervous stress and strain"), and went on to explain the prophylactic value of a certain powder

which "neutralizes the acid that is eating into the stomach wall," thus "preventing the development of dangerous ulcers, etc."

"Good Business"

All this is good psychology and good business. If proof be needed it is to be found in the *Statistical Review of Press Advertising*. Reference to this interesting publication reveals the astonishing fact that during 1936 eight firms which advertise remedies for nervous or digestive disorders spent a total sum of nearly a million pounds in the Press alone. During the first three months of the present year the sum spent on Press advertising by the same eight firms amounted to more than £252,000. Continued publicity on this scale can mean only that the goods offered find a very ready market.

The morality of it all is another question. Apart from the doubtful propriety of exploiting for commercial ends the contention of the London busmen that their conditions of work are specially conducive to particular diseases, a contention the justice of which is not here under consideration, grave objections to an advertising campaign of this description readily suggest themselves to the medical mind. Every practising doctor knows how harmful may be the habits of self-diagnosis and self-medication which are encouraged by advertisements of proprietary medicines in the popular press. These habits, in addition to causing in many cases a very unfortunate or even fatal delay in summoning skilled medical assistance, often result in direct physical injury of a serious kind. Recently, for example, attention has been drawn by a medical writer to the risk of alkali poisoning in the indiscriminate consumption of the so-called stomach powders which are widely taken without medical prescription (*British Medical Journal*, November 7, 1936).

Exploitation of Alarm

Perhaps, however, the chief dangers of advertising of the kind here considered are psychological rather than physical. Many of these advertisements are designed to alarm a reader with slight digestive symptoms by suggesting to him that the dreaded acid has already begun its deadly work of "eating into the stomach wall." Dyspepsia and anxiety commonly go together, and although the exact relationship between the two is not clear, it is by no means improbable that this deliberate stimulation of the patient's fear causes a serious aggravation of his physical disorder. Indeed, it is not beyond the bounds of possibility that there are many sufferers from gastric and other complaints whose troubles are primarily due to the fear engendered by such callous and unscrupulous publicity.

This is commerce without conscience, and those engaged in it are not to be moved by any reasonable appeal. It is to be hoped that the day is not far distant when our legislators, who at present seem strangely indifferent to the problem, will provide the protection which the public so urgently needs.

The British Standards Institution has issued a specification for portable chemical fire extinguishers dealing with the foam type and carbon-tetrachloride extinguishers. This specification forms a supplement to the acid-alkali type of portable chemical fire extinguishers; they have been prepared to meet the need felt by users and manufacturers for nationally agreed standards for their equipment. Copies of this British standard (No. 740/1937) may be obtained from the Publications Department, British Standards Institution, 28, Victoria Street, S.W.1, price 2s. 2d. post free.

Reports of Societies

MARRIAGE IN RELATION TO ALCOHOL

At the meeting of the Society for the Study of Inebriety on July 13, with Mr. ARTHUR EVANS in the chair, a paper was read on "Marriage in Relation to Alcohol and Drug Addiction" by Dr. LILIAS BLACKETT JEFFRIES of the New Sussex Hospital for Women and Children, Brighton.

Dr. Jeffries made the remark, which rather surprised her audience, that after somewhat extended research she had come to the conclusion from the authorities she had consulted that marriage and alcohol had nothing in common. The many tragedies in marriage when one of the parties was addicted to alcohol were, of course, well known, but she had endeavoured to study the question objectively, and after going carefully into the conclusions of C. R. Stockard and other investigators on alcohol in its biological aspects she felt that the findings more or less cancelled one another out. Stockard himself rather turned down his experiments in his later writings. She had thought to collect irrefutable evidence of the effect of alcohol on the germ plasm, but this had amounted to nothing.

Alcoholic Parentage

After a brief discussion on the symbolism of alcohol at the marriage feast and the use of alcohol as an aphrodisiac, Dr. Jeffries touched on the question of the effect of alcoholic parentage on the offspring. Karl Pearson's statistical study in 1910 was well known; it had never been repeated in anything like the same massive way. A recent study on the progeny of chronic alcoholics showed that psychosis of many varieties was found to be definitely more frequent in families of chronic alcoholics than in those of sober persons. This upheld the view that alcoholism was one of the manifestations of a defective inheritance. Some writers, however, made a distinction between the offspring of a man before he took to drink and afterwards. The effect on children of alcoholism in the parents was more marked when the defect was on the mother's side. But alcohol was by no means the only racial poison at work, and its effects could not be disentangled from those of syphilis and true inherited defect. Defective lactation was said to be common amongst alcoholic mothers, and also among the daughters of alcoholic fathers in proportion to the degree of their alcoholism. Any such direct effect upon the infant, however, faded into insignificance beside the miserable social results to the children of parents addicted to drink. The most important thing was that the children were deprived of that sense of security on which their outlook in life depended. Lesser degrees of alcoholism also had their effects on family life, which became permeated by uncertainty, fear of the incalculable, sometimes fear of violence. The habit of alcoholism might result from matrimonial troubles, and then in turn aggravate them.

As for legislation affecting marriage and alcoholism, chronic drunkenness was not a ground for divorce in England; it was a ground for judicial separation, which meant that family life was ruined. In Germany drunkards could be legally sterilized, and in two American States—Washington and Ohio—marriage was prohibited to alcoholics. Of course, such laws were easy to evade, but their existence on the statute book helped to create public opinion. As to the therapeutics of marriage in relation to alcohol, she was at a loss to find anything to say. The committee of the League of Nations in its investigations seemed to have touched upon every other aspect of alcoholism save this. In a last effort to say something good about alcohol in relation to matrimony, she could only recall the well-known picture of the old couple toasting one another in sherry on the occasion of their golden

wedding, and Robert Louis Stevenson's advice not to marry a teetotaller or a non-smoker.

Conduct the Criterion for Divorce

Sir ROBERT ARMSTRONG-JONES said that to-day the marriage law in too many instances had ceased to exist except in name, and it was felt that a relaxation of the bonds must be initiated by a change in the law in the interests of the children, the home, and society. Under what conditions might it be justifiable to dissolve a marriage, which was a religious ceremony as well as a legal contract? The present law enacted that the adultery of one of the parties was ground for divorce. Such an act not only defiled the home, but it adulterated the family, and this through conduct which was not only injurious and hurtful to family life, but was detrimental to society. Cruelty, again, was conduct that might mean not only danger to life and limb, but also mental torture. Desertion was a form of cruel conduct which in many instances among the poor would mean starvation for the wife and children, were it not for help from public assistance. All these things—adultery, cruelty, and desertion—implied conduct which was contrary to the teaching of Christ and to the Christian view of marriage as a lifelong union. Conduct, therefore, from whatever cause became the ultimate criterion for divorce. Drink and drug addiction both tended to alter conduct, and the effect of alcohol when taken to excess (and very little affected highly strung persons) was a complete deterioration of the moral life. Small doses of alcohol started a desire and later a morbid craving for stimulants, and the habit of drinking gradually became fixed until inebriety or chronic alcoholism was established. In such case the persons concerned lost all sense of propriety and shame. There should be a way to deal with such conduct for the sake of the children in the home. Already it was punishable to be found drunk in a public place, also to serve drinks to a drunken person, yet such a person could beat his wife and children and drink to excess in his own home with impunity. Another difficult person to deal with was the dipsomaniac, who was quite different from the chronic drunkard or the inebriate. During the craving, although not certified, he was a lunatic. He was a periodic drinker, subject to a sudden, intense, and irresistible impulse to drink, and if this craving were not indulged he might inflict serious injury on himself and others. The same applied to the craving for morphine or opium, for cocaine, and for some other sedatives such as the urea group. Owing to the altered conduct which resulted, it would be possible to deal with these cases under the more general title of cruelty, and so include alcohol and drug addiction under the section dealing with cruelty or insanity.

Sexual Difficulties and Alcohol

Dr. A. E. A. CARVER said that in an institution for inebriates, on investigating the origins of the drink habit, marriage and drink were often found to be very closely associated. Sexual difficulties and alcohol went together. Alcohol helped a person temporarily and fictitiously out of those difficulties; it also indirectly increased them, and alcoholic indulgence might even come to take the place of sexuality, so that a person drank instead of behaving in the normal sexual way. The effect upon the children when either parent was alcoholic was simply disastrous. The children did not know where they were. Very often there was marital cruelty which made the children take sides for or against a parent. The only good thing that followed from a drunken parentage was the frequency with which the children became rabid teetotallers.

Other speakers, lay and medical, gave their opinions briefly on the subject, and the Sister Superior of Spelthorne St. Mary mentioned that in the home for inebriates of which she was in charge the drug addicts were nearly always unmarried women, while the alcoholics were almost invariably married and attributed their alcoholism to married unhappiness.

Local News

SCOTLAND

Cost of Chronic Sickness

At the annual meeting at Largs of the Scottish Association of Approved Societies Miss Muriel Ritson, Controller in the Department of Health, said that insured persons continually sick over the year accounted for more than half of the total sickness among insured persons and for over 40 per cent. of the expenditure on sickness and disablement benefits. The influenza epidemic early in the year had cost £200,000. The lines of development which seemed likely to reduce the bill for sickness seemed to be that young people should be given in pre-insurance days every possible aid to the maintenance of health. The total number of periods of incapacity for the past year reached the exceptional figure of 480,000, which was 28 per cent. above the average of the six years 1930–6 and 27 per cent. above the figure for the previous year. The number of cases of sickness other than influenza had increased from 305,000 in 1930–1 to 357,000 in 1936–7, and there was evidence of an increasing amount of illness of the more persistent kind. These chronic cases had accounted for more than one and a half million weeks of sickness. The speaker mentioned a Danish scheme which included a system of notification of persons under 30 with disabilities which would cause considerable permanent loss of working capacity, and training was provided for these. At first it had been difficult to persuade employers to take on such persons, but this difficulty had been overcome. The Department of Health proposed to begin in September an inquiry into the cause and treatment of illnesses lasting over thirteen weeks, with the object of finding out the causes of long illnesses and the extent to which measures of rehabilitation were required in this country. Mr. T. W. Wallace, who presided at the meeting, expressed his belief that the increase of sickness was partly due to an increased willingness to claim benefit and partly to an inclination to regard as incapacitating a degree of illness which before 1913 would not have justified abstention from work. He hoped that the fitness campaign would bring an improvement which ordinary medicine and dentistry, combined with careful administration, seemed powerless to effect.

Veterinary Education

At the annual prize distribution of the Royal (Dick) Veterinary College, Edinburgh, Sir Thomas Hudson Beare, who presided, said that the number of students was increasing year by year, so that their present buildings were overcrowded. The Development Commissioners had made a grant of £20,000 provided another £20,000 was raised by public subscription. Sufficient had now been received to justify the board of management in having plans prepared for the first extension, and it was hoped these would be acceptable to the Treasury. Speaking of the proposed scheme for centralization of veterinary services, he said that the College was directly concerned in the proposal. London was a long distance away, and local considerations were apt to be forgotten. If this was merely an administrative question it did not matter greatly, but if it included an idea that research into animal diseases should be concentrated in London and cold-shouldered in Scotland he would be very strongly opposed to it. In a higher institution like the College, research and teaching must go on side by side. Principal Charnock Bradley said that whatever development took place the production of efficient practitioners was of primary importance. Professor W. T. Ritchie, who presented the prizes, said that the students might be justly

proud of this institution, which owed its inception 114 years ago to the genius and patriotism of a private individual. The influence of John Barclay, a distinguished anatomist early in the nineteenth century, had determined William Dick to become a veterinary surgeon and to found a veterinary hospital, and in 1823 he had established under the auspices of the Highland Society of Scotland the veterinary school which still bore his name. The veterinary art differed in some respects from that of the medical practitioner, but the science which inspired the two professions was the same. Both had to know the fundamental principles of dietetics, pathological processes, and the preservation of health. A vast amount of disease affected man as well as the lower animals, and all investigations and discoveries about these diseases were of mutual benefit to medical and veterinary science. It was possible that new discoveries regarding distemper might have a bearing on influenza. Within recent years there had been a rapid expansion of knowledge on every phase of biological science, and veterinary education was undergoing reform in conformity with modern standards, so that the curriculum had been extended to five years. The college buildings, which afforded adequate accommodation twenty years ago, now needed to be extended to meet the requirements of teaching and research, and it was a good omen that the Treasury was becoming increasingly sympathetic to the endowment of research in animal diseases.

Princess Margaret Rose Hospital

At the annual meeting of subscribers to the Princess Margaret Rose Hospital for Crippled Children, Edinburgh, on July 9 the Earl of Home, who presided, announced a gift of £8,000 from Lord Nuffield as a contribution towards the £10,000 required for an extension to the hospital. A sum of £700 from the Scottish Women's Rural Institutes was also mentioned: this had been collected as a gift to the Queen in commemoration of the coronation year, and had been passed on by Her Majesty for the benefit of the funds of the hospital. The annual report submitted by Lady Findlay indicated the rapid growth of this hospital, which was opened five years ago for thirty patients and which now contained 100 beds, a number that proved to be insufficient. The hospital was the pioneer of orthopaedic work for children in Scotland, and served the ten counties in the south-eastern area of the country. Last year 236 children had been treated, and there had now passed through the hospital in the five years of its existence 565 patients. In addition, clinics in Edinburgh and the county areas were regularly visited, and close touch was maintained with the local authorities, whose medical officers now realized the great value of the clinic services. The financial position of the hospital continued to improve, and it had been found possible within the last few months to pay off a temporary loan of £3,000 granted by the Scottish branch of the Red Cross Society. Expenses for the past year had amounted to £11,229, and after setting against these the maintenance charges received from local authorities, etc., and subscriptions amounting to £2,008, the deficiency to be carried forward was £863. As the hospital increased in size and more charges for maintenance were received the expenses per head would tend to diminish. Mr. W. A. Cochrane said it was now possible to claim that 75 per cent. of all crippled children could be benefited sufficiently to enable them to earn their living. Many of them were completely cured, and for a certain proportion who had a serious permanent physical handicap a system of vocational training effected sufficient rehabilitation. Local clinics connected with the hospital now numbered twenty, and were an essential link in the scheme for getting the patient early and providing preventive out-patient care. The hospital needed many more, and the importance of the preventive aspect of this work should be emphasized. The present national drive to improve physical education was really a national orthopaedic system. After the meeting a garden party was held in the grounds, and the audience of about 500 people inspected the new massage department, swimming pool, and wards of the hospital.

St. Andrews Ambulance Association

At the annual meeting in Glasgow on July 2 of the St. Andrews Ambulance Association it was intimated that the King and Queen had granted their patronage to the association. Sir John Stirling Maxwell, who presided, said that during the year the headquarters staff of this association had attended 1,611 accidents in which motor vehicles had been involved. There had been a great increase in the number of cases to receive attention all over the country; 47,422 calls had been made upon the association's wagons, of which 10,987 were cases of accident. An aeroplane ambulance service instituted in 1933 was doing useful work, and during the year forty-two patients had been brought from remote islands to Glasgow for urgent treatment. There could be no doubt that many lives had been saved by this rapid transport, and it had in a sense completely transformed the conditions of life in the outlying islands of Scotland. This association was one of the bodies to which the Government had entrusted the duty of instructing the public in air raid precautions, and during the year over 3,000 members had received such instruction. Colonel D. J. Mackintosh, speaking of the steady increase of the association's work, said that in 1912 its income had been £4,000 and in 1937 it had increased to £15,500, but further subscriptions and donations were required to support the work. Subscriptions from employees had in the past year increased by over £400.

Registrar-General for Scotland

The Secretary for Scotland has appointed Mr. James Gray Kyd to be Registrar-General for Scotland in the room of Mr. A. Froude, retired. Mr. Kyd entered the Civil Service in 1912 as actuary of the National Health Insurance Joint Committee in charge of the branch office in Dublin, and afterwards in Edinburgh. He has been a principal actuary in the Government Actuary's Department in London since 1926, and secretary to that department since 1932. He will take up his new appointment on September 1.

ENGLAND AND WALES

The King's Fund

At the annual meeting of the President and General Council of King Edward's Hospital Fund for London the Duke of Kent read an appreciative message from the King and mentioned the first appearance in the balance sheet of a full year's income from the gift of £20,000 by King George V. He expressed the hope that in the current year the deficit on last year's working would be wiped out and the Fund return to its usual proud position of paying its way out of current revenue. The financial summary for the year showed that the ordinary distribution had remained unchanged at £300,000, the total to which it was raised during the crisis of 1932, but there had been added for the first time a distribution of £2,000 in respect of the work done for hospital out-patients by district nursing associations. The number of hospitals receiving grants was 146 as compared with 145 in 1935, and the number of convalescent homes aided was fifty-six—an increase of two over the total for the previous year. During the last ten years a total sum of £3,256,088 has been allocated to hospitals and convalescent homes. In 1936 a further gift of £10,000 for its radium work was received by the Fund and used to increase the stock of

radium held to 17 grammes as well as to facilitate various schemes for enhancing the usefulness of this method of treatment. The League of Mercy contributed £10,000. Expenses during 1936 amounted to £16,405, less than a quarter of which was expenditure on the collection of money and on propaganda for the King's Fund and the hospitals. A fresh series of illustrated lectures to schools and other audiences, followed by visits to hospitals, was organized during the year under review; drawing-room meetings were held, and there was a display of modern hospital equipment at the Ideal Home Exhibition. Through the generosity of Lord Wakefield the Fund was enabled to undertake the preparation of a new and more ambitious film, which it is believed will have much propaganda value. The Management Committee of the Fund issued a revised memorandum on fire precautions in 1936 following those previously published in 1907 and 1926. The special needs of the Fund at the moment include additional financial assistance to meet the deficit, which has amounted to about £7,000 in each of the last two years, to increase the annual distribution to meet the greater needs of the hospitals consequent largely on the rise in prices and the advances in medical science, and to provide more substantial assistance to schemes for bringing and keeping hospital buildings and equipment up to the constantly rising standards. It is noted in the report of the Revenue Committee of the Fund that the ordinary income of the hospitals rose by about £152,000, but that this did not keep pace with the rise in expenditure, which was estimated at £184,000. The main financial problem now seems to be the increasing costs of maintenance, due largely to the present rise in prices, to better conditions for nurses (including shorter hours of work), and to the cost of new scientific methods of treatment. The most recent memorandum (issued last week) dealt with the reduction of waiting in out-patient departments between the time when the patients arrive and when they meet the medical officers.

The Merseyside Hospitals Council

The Merseyside Hospitals Council (Merseyside for this purpose meaning Liverpool, Birkenhead, Bootle, and Wallasey) has now completed ten years' work. It has brought together the management boards and honorary medical staffs of the voluntary hospitals in its area, and such bodies as organized labour, employers' associations, and the churches in hospital support. The income of its predecessors, the Liverpool Hospital Saturday and Sunday Funds, before the Council was established was some £25,000 a year. In 1936 the Council's income was £180,000. About 90 per cent. of this income is derived from the "penny in the pound" fund, which increased by some £14,000 during the last year. This increase is partly attributable to steps that have been taken by the Council to improve the machinery of extension, particularly through a regular system of surveying the 6,500 contributing establishments operating the fund to make sure that facilities are provided for the clerical, junior, casual, and seasonal employees and pensioned persons to contribute. The cost of collection, including propaganda, of the "penny in the pound" is 9 per cent. of the revenue. There are over 300,000 contributors, and in 5,000 of the contributing establishments, being 77 per cent. of the whole, the employers add one-third to the employees' contributions, the amount so added last year being over £29,000. The Guild of Undergraduates of the University devotes much time and energy each year to an annual collection for the hospitals, and as a result a further £6,000 was made avaiable for distribution by the Council. During the last eight years, thanks to the operation of the Council, the associated hospitals have been able to add £140,000 to their funds, and more than half a million has been spent on maintaining, extending, and improving hospital buildings and equipment. Even so the hospitals still have to use free legacies to meet current expenditure. The Council's main purpose is the maintenance of the voluntary hospitals, but it works in co-operation with the municipal hospitals, and has agreed to an increased grant to the corporation for services rendered to contributors in those institutions, in return for which the corporation refrains from assessing the contributors who enter a municipal hospital. Lord Cozens-Hardy, who has been chairman of the Council since its inception, has felt compelled to resign by reason of the many public and business claims upon his time, and Mr. W. Sutcliffe Rhodes, chairman of the David Lewis Northern Hospital, has been elected to succeed him.

Health of Manchester School Children

Dr. Henry Herd, school medical officer for Manchester, in his annual report for 1936 draws attention to the recent appointment of a school aurist and the establishment of two classes for partially sighted children. All children inspected during the year were assessed by the medical officers in regard to their state of nutrition. Dr. Herd, while indicating the difficulties and fallacies inherent in such assessment, produces figures which show that on the whole the nutritional condition of the older children was better than that of the younger, and that actually the total numbers classed as malnourished were small. In the special inquiry into these cases of malnutrition the average expenditure on food in the families concerned was investigated. The tabular results of this inquiry seem to substantiate Sir John Orr's statement that only when the amount expended on food reaches about 10s. a week per head is the feeding of a family likely to be satisfactory. Dr. Herd suggests that apart from supplementing inadequate food intake in these cases much could be done by educating the public in the values of the various foodstuffs, and by educating mothers in the art of cookery.

FRANCE

[FROM OUR CORRESPONDENT IN PARIS]

Venereal Disease Statistics

The French Ministry of Public Health has issued some disquieting statistics concerning syphilis in connexion with the Bill for the reform of the campaign against venereal disease. It is estimated that syphilis is responsible for 40 per cent. of the cases in hospitals for chronic diseases, for 10 per cent. of the general mortality, for 75 per cent. of the deaths due to congenital debility, for 50 per cent. of sudden deaths and deaths due to disease of the nervous and cardiovascular systems, and for 33 per cent. of the deaths due to disease of the renal and digestive systems. There is, however, matter for rejoicing as well as dismay. The number of anti-venereal services has increased from forty in 1916 to 1,821 in 1936, and the number of cases of primary syphilis in the army has fallen from twenty-one per 1,000 in 1917 to less than two per 1,000 for some years past. There has also been such a remarkable decline in the rate of stillbirths and deaths due to congenital debility and malformation during the first year of life since 1919 that an annual gain of over 20,000 lives can at present be claimed in connexion with this change.

Declining Numbers of Foreign Medical Students

Professor Hartmann, late president of the French Academy of Medicine and the very active President of l'Association pour le Dévelopment des Relations Médicales entre la France et les Pays Étrangers, has lately drawn attention to the very significant decline in the number of foreign medical students registered by the Paris Faculty of Medicine. The peak was reached in 1929, when 293 such students were registered. The corresponding figures for 1934, 1935, and 1936 were 94, 71, and 31 respectively. On the other hand, the number of

French medical students registering in Paris is rising. This ebbing of the foreign tide is, in Professor Hartmann's opinion, a sad phenomenon, not least because it may mark a decline in the influence of the Paris Faculty of Medicine in other countries than France. He is sceptical as to a reversal in the near future of this movement, whose causes, he considers, are numerous. The most important is probably the world crisis with its monetary restrictions. The agitation against foreign medical students, rather hectic only a short time ago, and conducted with all the impetuosity of nationalist youth, has also played its part; and the stranger within the gates has not been slow to scent the antagonism against him. Then there are the growing counter-attractions of magnificent new hospitals and laboratories in countries other than France, not least in the South American countries.

The French Birth Rate

The subject discussed by the Assises de Médecine last March was the French birth rate, and the conclusions to which this meeting came were of such interest and importance that a summary of them was presented to the Academy of Medicine on June 8 by Dr. H. Godlewski, the secretary of the Assise. Though nothing startlingly new emerged from this discussion, it proved instructive on account of the emphasis given to certain elements of the problem. It was generally agreed that the two most important factors responsible for the decline in the birth rate are birth control or voluntary restriction and induced or voluntary abortion, which in some parts of France has become such a scourge that it is held responsible for "the failure of a quarter of the births." In more general terms the decline in the birth rate was traced to the "penetration of modern animation" into the community —an apt if vague formula. Dr. Godlewski's report was followed by a discussion which ended in the appointment by the Academy of a commission for the study of the means whereby the moral standards as they affect the birth rate may be raised for the benefit of the country. This commission was appointed in spite of certain criticisms by those who doubted the ability of the Academy of Medicine to deal with the moral aspects of the problem. These latter may be and, indeed, probably are its most important aspects, and if 1,034,000 infants were born in France in 1868 and only 638,000 in 1935, this remarkable decline would seem largely to be due to the change in the mothers from timid modesty to bored and brazen indifference with regard to their yet unborn progeny. As Dr. A. Siredey remarked, one could, a generation ago, draw a confession of induced abortion out of a woman only with the greatest difficulty; to-day women think nothing of volunteering such information to any doctor who will listen to them.

Surgeon and Prophet

Dr. G. Lavalée has lately dug out of obscurity the prophetic musings of a surgeon of Montpellier nearly one hundred years ago. He was Professor Lallemant, whose career was so distinguished that in 1843 he was a candidate for membership of the Institut de France. Setting out for Paris in mid-winter to sustain his candidature by appropriate lobbying, he was caught in a snowstorm, and for three days had to kick his heels in a small farm. Having cornered all the available white paper in the locality, he set up his study in a stable and proceeded to cast the horoscope of the world during the next hundred years. This precursor of H. G. Wells foresaw the time when ships would have no sails, masts, or funnels, but would race along at an incredible speed given them by screws. The Suez and Panama Canals were visualized as realities, as was the admission of women to all the educational facilities and professional careers at that time open only to men. Scholarships would be given to the most promising students, and public appointments would depend on competitive examinations. Emancipation of the Press, separation of State and Church, and universal suffrage were also foreseen. In the political world the storm-bound professional surgeon and amateur crystal-gazer anticipated the liberation of Italy and the unification of the German Empire. The prophet who scores so many bull's-eyes at long range deserves all honour, not merely in his own country, and he should be listened to with all due respect and humility when he speaks of the future of a neighbouring country. Professor Lallemant prophesied decadence for England, "the fate awaiting all those peoples who are commercial to the exclusion of all else."

BRITISH EMPIRE CANCER CAMPAIGN

In the absence of Viscount Hailsham, Lord Horder presided at the last quarterly meeting of the Grand Council of the British Empire Cancer Campaign held at the new offices, 11, Grosvenor Crescent, S.W.

It was reported that the first meeting of the newly formed Co-ordinating Committee, set up to ensure the closest co-operation in cancer research and appeal administration between headquarters and its provincial autonomous branches, with laboratory centres of research, had been held in London on July 7. The meeting had been attended by representatives of the Yorkshire Branch, the Birmingham Branch, the Lancashire, Cheshire, and North Wales Branch, and the North of England Branch. It had been decided that future meetings of the committee should be held in the provincial centres, the first being at the Yorkshire centre in Leeds.

On the recommendation of the Scientific Advisory Committee the following grants were approved: £500 to Dr. P. M. F. Bishop at Guy's Hospital for the expenses for one year of certain investigations in regard to endocrine therapy in relation to cancer; £250 to Professor G. I. Finch at the Imperial College of Science and Technology for the expenses of an investigation into the nature and structure of carcinogenic compounds; and £160 to Dr. P. R. Peacock at the Glasgow Royal Cancer Hospital for the purchase of special apparatus for the continuation of his cancer research. On the recommendation of the Joint Committee of the Campaign and of Mount Vernon Hospital, Dr. G. Cranston Fairchild was reappointed the William Morris Research Fellow in Radiology at that hospital for a further period of one year. The William Morris Research Fellowship was established five years ago by a gift of £25,000 from Lord Nuffield.

Grand Council received a detailed report of the activities of its Central Propaganda Committee, and voted a further grant for the year 1937–8 for the extension of the scheme for free educational lectures to the public in the counties of Bedfordshire, Berkshire, Buckinghamshire, Cambridgeshire, Essex, Hampshire, Hertfordshire, Huntingdonshire, Kent, Norfolk, Northamptonshire, Oxfordshire, Suffolk, Surrey, and Sussex.

On the nomination of the Middlesex Hospital Professor J. McIntosh, M.D., director of the Bland-Sutton Institute of Pathology of that hospital, was elected one of its representatives on the Grand Council.

The date of the annual general meeting of the Campaign, to be held at the House of Lords, has been changed to Tuesday November 30, when H.R.H. the Duke of Gloucester, the new president, will take the chair.

In May, 1933, the establishment was announced of a scheme of research fellowships in accordance with a direction in the will of the first Viscount Leverhulme that the income arising from part of his estate should be devoted to the granting of scholarships for research and education. The list of fellowships and grants for research in 1937 has now been issued by the secretary, Leverhulme Research Fellowships, Union House, St. Martin's-le-Grand, London, E.C.1. The recipients of grants include D. Elliot Dickson, M.D., F.R.C.S.Ed., of Lochgelly, Fife, for an investigation of occupational morbidity in coal miners in Scotland.

Correspondence

When to Operate in Appendicitis

SIR,—The following summary of treatment of acute appendicitis may be helpful to your correspondent Dr. H. Hepburn (*Journal*, July 3, p. 34). All surgeons agree that the sooner an appendix in the early stages of inflammation is removed the better, but there is still some disagreement regarding cases of more than thirty-six or forty-eight hours' duration, in which there is an indefinite mass (local peritonitis) or a circumscribed swelling (abscess). Following the principles enunciated by Ochsner and Sherren, I have always advocated that expectant treatment should be adopted in these cases, with the following results:

1. Expectations are realized and inflammation resolves. The appendix is removed three months later, and contrary to expectations the freedom from adhesions is remarkable. In about 65 per cent. of cases inflammation subsides, and the subsequent operation is clean and simple and the wound heals soundly.

2. In about 25 per cent. of cases an abscess forms, if one is not already present. This is no cause for alarm, as it indicates resistance on the part of the patient, and that adhesions have arrested the spread of infection. Expectant treatment is still adopted, but simple drainage may be advisable for two reasons: (*a*) Increase in size of the abscess. Although an abscess will usually rupture into the bowel, the possibility of leakage into the peritoneal cavity cannot be overlooked. (*b*) Slow absorption, as toxaemia is liable to cause visceral degeneration. After simple drainage or absorption of an abscess three months are allowed to elapse before the appendix is removed.

3. In about 10 per cent. of cases expectant treatment must be abandoned on account of exacerbations of pain, increase of local tenderness and rigidity, or elevation of pulse and temperature.

Large numbers of statistics from various sources show that the mortality of cases with localized peritonitis or abscess subjected to immediate operation is about 6 per cent., whereas with adequate expectant treatment the mortality is 3 per cent. Moreover, with expectant treatment complications such as cellulitis of the abdominal wall, secondary abscesses, faecal fistula, etc., are reduced by more than 50 per cent.

With regard to the case quoted by Dr. Hepburn, as it was a six-day appendix with a localized swelling I feel that by adopting expectant treatment the medical officer in the hospital was acting in the best interests of the patient. At the same time the "trenchant comments . . . of surgeons on . . . doctors" who delay in sending patients to hospital are completely justified. Efficient expectant treatment can only be carried out in a nursing home or hospital where the patient is under constant supervision of the surgeon, who can then immediately operate if any untoward features become evident.—I am, etc.,

London, W. 1, July 14. R. J. MCNEILL LOVE.

Technique in Knee-joint Operations

SIR,—The value of aseptic technique as practised by Lane was probably his greatest contribution to surgery, but Mr. Blundell Bankart (*Journal*, July 17, p. 136) must know that even in his hands it was not infallible. So far as I am concerned we are agreed that the deeper layers of the skin may harbour organisms, and that these are in dangerous proximity to the field of operation when the skin has been incised. I personally believe that there is less chance of infection of the wound if the cut edges of the skin are immediately painted with iodine. My friend Mr. Blundell Bankart prefers to rely on the clipping of towels over the margins of the wound. He does not seem to be aware that organisms may have other methods of progression than what he describes as my "fantastic notion of micro-organisms jumping through a sterile towel." Mr. Bankart and I know that our results are very much the same, and it may be that a combination of both methods is the best solution, but in any case I am sure that he is unwise to preach the doctrine that because great advances in surgical technique have been made since the days of Lister none are possible since the days of Lane.—I am, etc.,

Birmingham, July 19. NAUGHTON DUNN.

Insulin Hypoglycaemia in the Tuberculous Diabetic

SIR,—In 1925 (May 30, p. 1004) you were good enough to publish a note of mine on the subject of hypoglycaemia in which I described a fatal case in a young diabetic who was also suffering from pulmonary tuberculosis. This case was also quoted by Wauchope (*Quart. J. Med.*, January, 1933) in a critical review of the condition, in which he also mentions another case and comments on the smallness of the dose of insulin and the relatively long interval between suspension and the fatal attack, which interval was two days in my first case.

In my clinic at Liverpool this has happened again. A man of 25 attended from September, 1933, to April, 1934, during which time his weight increased by 11 lb. and, when he ceased to come, he was taking 20 units of insulin daily; his carbohydrate intake was uncertain as he was unreliable about his food. He was not seen again until July 1, 1937, when he was admitted into hospital at 9 a.m., emaciated and with glycosuria. An *x*-ray examination showed diffuse pulmonary tuberculosis, and insulin was withheld until the evening, when 10 units were given just before a good meal. Nevertheless, he died at 9.30 p.m. in hypoglycaemic convulsions. The one blood examination that was possible showed 107 milligrammes of sugar and 39 milligrammes of urea per 100 c.cm. A post-mortem examination was made. Protein shock has been suggested as a cause of this hypersensitiveness, but I should be glad of the views and experiences of others who are interested in the diabetic.—I am, etc.,

Liverpool, 1, July 12. H. S. PEMBERTON.

Chronic Monocytic Leukaemia

SIR,—I have read with interest Dr. G. Stewart Smith's description of his case of chronic monocytic leukaemia in the *Journal* of July 3 (p. 1), which, as he pointed out, is of special interest on account of the extreme splenomegaly and absence of anaemia. His statement, however, that a palpable spleen is unusual in this type of leukaemia appears now to require modification in the light of Edwin E. Osgood's recent analysis of 133 cases of monocytic leukaemia, published since Dr. Smith's article went to press (*Arch. int. Med.*, June, 1937). Osgood shows that, while not a constant finding, a palpable enlargement of the spleen is quite a common feature. I doubt if it is wise to gauge the chronicity of a case by the size of the spleen. In the case recorded by me last year (*Liver-*

pool med. Chir. J., 1936, **44**, 47) the clinical history was of at least eight months' duration, while the spleen weighed only 17 oz.—I am, etc.,

Liverpool, 1, July 13. JOHN DUNCAN HAY.

Prominal in Treatment of Epilepsy

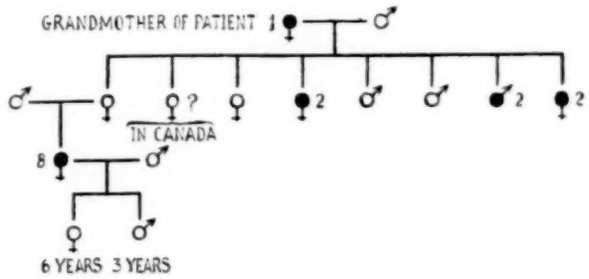
SIR,—Having recently substituted prominal for luminal in the treatment of patients suffering from insanity with epilepsy, I should like to agree with the results published in the issue of July 10 (p. 61) by Dr. Guy Millman in his interesting report.

It has been, I believe, a common experience to find that luminal controls the fits only at the cost of aggravating the aggressive irritability typical of the demented epileptic. With prominal, however, the decrease in the number and severity of the fits is not followed by an exacerbation of the non-convulsive outbursts of ill temper, and the period of confusion which often follows the fit appears to be appreciably shortened. All these factors are of considerable importance in the institutional care of the epileptic patient.—I am, etc.,

Southall, Middlesex, July 14. L. MCL. CURTISS.

Hereditary Sebaceous Cysts

SIR,—Last week a woman asked me to remove several sebaceous cysts from her scalp. Remembering the interesting article on hereditary sebaceous cysts in the *Journal* of May 8, I inquired if other members of her family were affected, and from her information compiled the following tree.



I removed seven cysts varying in size from a grape pip to a damson; the eighth was as yet too small to remove. The contents of two were rather greyer in colour than usual. I have not been able to examine the other affected members of the family so do not know if the numbers given are accurate or only the number of cysts large enough to attract attention.—I am, etc.,

Lee-on-Solent, July 11. EMILY A. C. WILSON.

Ocular Headache

SIR,—I read with much interest the article on ocular headache by Mr. D. Stenhouse Stewart (*Journal*, July 10, p. 59). In this he outlined a plan by means of which the general practitioner may more easily diagnose or exclude an ocular cause for headache. Any help which can be given in this direction will certainly be appreciated, and though I naturally agree with much that the writer has said I find myself at variance on one or two points. I must first qualify my criticisms by saying that Mr. Stenhouse Stewart did not maintain that by following his routine every headache of ocular origin could be diagnosed and the patient sent for further examination. His paper inferred, however, that the majority of such patients could be singled out. The investigation outlined by the writer consisted of the use of Snellen's test type, the ophthalmoscope, and some simple piece of apparatus for estimating binocular muscle balance at reading distance; with each of these I will deal in turn.

When a patient is unable to read 6/6 with one or other eye, then, excluding retinal disease, that eye is either short-sighted, very long-sighted, or has a considerable degree of astigmatism. The myope will rarely complain of headache; the hypermetrope may occasionally do so if he does much close work, and the patient with the high astigmatic error is more likely to complain of defective vision than of headache. A large percentage of patients with headache will read 6/6 or 6/9 with each eye separately. Everyone agrees that the ophthalmoscope should be used more extensively than it is, as much valuable information can often be got from the fundal picture, but, in my opinion, it is of no use in helping one to decide whether a headache is due to eye strain. On very rare occasions a practitioner may be able to see a choked disk, and so confirm a diagnosis of intracranial neoplasm, but for the one headache so produced there are many hundreds due to eye strain.

With regard to the use of the convergiometer, the great majority of ophthalmic patients have an exophoria—a tendency for the eyes to diverge—at reading distance, and if this is so, according to the writer, "all is reasonably well" and eye strain may presumably be excluded as a causal factor. Then, again, I have never found a low degree of esophoria—a tendency to convergence—cause discomfort for close work. Because many hypermetropes have to accommodate their eyes excessively to read they have an esophoria at this distance, but on correcting their hypermetropia by suitable plus lenses the muscle balance is restored. The headache, surely, is due to the excessive contraction of the ciliary muscle, and not to the demand put on the external recti to correct the convergence, as suggested in the article. Imbalance of the ocular muscles, though it may cause headache in some, is more responsible, I think, for a feeling of discomfort and strain than it is for actual headache. For example, old patients with a high degree of exophoria will complain of an inability to read for more than a few minutes at a time, even though their spherical correction is sufficiently strong. Others, again, will experience relief by keeping one eye closed.

I cannot agree with Mr. Stenhouse Stewart when, referring to the correction of small astigmatic errors, he says that "the relief of headache by correction of such errors is often due to the restoration of normal muscle balance by adequate glasses." It is easy to understand that by fully correcting hypermetropia one can reduce a tendency to converge, and similarly with myopia a tendency to diverge, but it is difficult to see how a small astigmatic correction will have any appreciable effect on a state of ocular imbalance. When a small astigmatic error is corrected in a patient suffering from ocular headache he is immediately relieved of his discomfort, and there seems to be no reason to doubt that this refractive error has given rise to the headache by causing some kind of strain on the ciliary muscle. In my experience the great majority of ocular headaches are due to low degrees of hypermetropic astigmatism alone or combined with some simple hypermetropia, often occurring in patients whose vision is 6/6 and whose lateral muscle balance, though not perfect, is within normal limits. In the case of young children, although I have examined a very large number of them for all manner of refractive errors, I have been amazed to find how very seldom one meets with a complaint of headache. This, however, only applies to young people under the age of 12 or 13, after which time ocular headache becomes increasingly common.

I would say that a careful history taken from the patient is a better guide to the practitioner in helping him to make at least a tentative diagnosis of ocular headache than any test he may apply, short of retinoscopy. It is true that the type and situation of the headache, varying as they do so tremendously, are not of very much assistance, but the time factor gives a better clue. Thus a headache coming on in the late afternoon in a patient working in an office, especially under artificial light, is invariably ocular. Others who have reached the age of 40 or more may complain of headache after prolonged reading or sewing, due to the onset of presbyopia. Quite commonly older people who already have glasses for close work will complain of headache in the early morning following an evening spent in reading, and here an increase in the strength of the lenses will cause a disappearance of the symptoms. By far the best test for headache due to eye strain is to ask the patient if a headache comes on after near work, or at the theatre, or, better still, the cinema, or whether it develops after such an entertainment. Now that cinemas are so much better ventilated than they were several years ago it is fairly safe to assume that a headache brought on by a visit to one of them is ocular in origin.—I am, etc.,

London, W.1, July 12. L. G. SCOULAR.

Histamine in Anaphylaxis

SIR,—I think the presence of histamine with eosinophil cells in the secretion of the respiratory tract, as mentioned by Dr. James Adam in the issue of July 10 (p. 88), is a constant phenomenon in all so-called allergic reactions. Applied as a scratch test, the typical plus five reaction results and eosinophil cells are found on section. Injected into animals histamine produces all the symptoms of anaphylaxis, varying exactly as do the symptoms of that syndrome in the different species injected. If the lungs of a sensitized guinea-pig or a strip of uterus is perfused with the protein to which they are sensitized histamine appears in the perfusate. Histamine is not found in the anaphylactoid reactions after the injection of barium, etc. That portion of the pituitary gland containing histamine and used therapeutically to contract the uterus stains with the eosin dyes.

It would thus seem as if anaphylaxis were due intermediately to the formation of histamine, and that when histamine is present eosinophil cells appear, possibly as carriers of histamine in sealed containers to the liver and other parts for destruction or excretion.—I am, etc.,

London, W.1, July 13. FRANK COKE, F.R.C.S.

Carcinoma of Rectum in a Girl of Twenty

SIR,—Mr. W. G. Evans is to be congratulated on his treatment of carcinoma of the rectum by means of radium (*Journal*, July 10, p. 64). There is only one point that I am not clear about, and that is whether or no a preliminary laparotomy was done in order to determine the presence or absence of lymphatic or liver involvement; presumably there was none, as the patient survived after four years. In my case there was a gland the size of a walnut in the mesosigmoid which showed carcinomatous deposits, and to my mind the treatment of colostomy followed by abdomino-perineal resection was the only method permissible.—I am, etc.,

R. RUTHERFORD, F.R.C.S.

Longtown, Cumberland, July 14.

Precipitate Labour

SIR,—The following unusual case of pregnancy with precipitate labour may merit inclusion in your columns.

At about 7 p.m. on June 26 I was called out to see a patient. The messenger could give no information as to what was wrong, and although I arrived at the house within five minutes, at least fifteen minutes must have elapsed between the time I was sent for and my reaching the house, where I found that the patient had recently delivered herself of a full-term male infant, her first child.

The curious part of the case is the history. The patient, aged 24, was married, and had always been regular with her periods, which came on approximately every three weeks and lasted three days. The amount of loss was scanty, and this was no doubt due to her anaemic condition. Throughout the whole of the pregnancy she had seen her periods regularly, and although she admitted that she had noticed her abdomen becoming larger, she had merely thought she was putting on weight. She also said she had felt something move inside her abdomen from time to time, but she put this down to flatulence.

On the day the baby was born she went to work at the factory as usual, but asked permission to go home early as she "did not feel very well." When she arrived home she found that there was slight bleeding from the vagina, and as her ordinary period was then due she took no further notice of this. In fact, she did some heavy housework and then cooked the dinner. After this she laid on the bed, as she felt tired, not troubling to undress. She thinks that she must have been "half asleep," when she felt something between her legs, and heard the infant cry. She was so surprised as well as terrified that she "pulled the infant to her bosom," and in doing so she must have severed the umbilical cord. It was only then that she realized what had happened and sent for me.

When I arrived there was no haemorrhage from either end of the umbilical cord, which was completely severed some six inches from the infant's end, and the umbilical vessels were collapsed. The placenta had already separated, and only needed expression from the vagina. The perineum was intact. Beyond ligaturing the umbilical stump there was very little left for me to do. The puerperium was uneventful.

The outstanding features of this case are: (*a*) the regularity of the periods during the entire pregnancy, (*b*) the absence of vomiting during the early stages of pregnancy, (*c*) the painless labour, (*d*) the unruptured perineum in a primipara without medical aid, the baby weighing 9 lb., and (*e*) the absence of any ill effects to either mother or infant resulting from the severing of the umbilical cord. Any one of these features is in itself unusual in average maternity cases, so that a combination of them all must indeed be a rare "event."—I am, etc.,

J. HAROLD RIPLEY, M.R.C.S., L.R.C.P.

Tottenham, N.17, July 6.

Noise Outside Hospitals

SIR,—I have just been discharged from a nursing home after an operation which caused me neither pain nor serious discomfort. I mention this fact as I do not want it to be thought that I am complaining on my own account; but I wish, so far as possible, to obtain backing from the medical profession on a complaint, in many cases a serious one, which patients in these homes have, I believe, very good grounds for making, and the reason for which, even to one as little ill as I was, was most noticeable. This is the absolute lack of any decency or consideration on the part of a great many of the motoring public.

During the day I can understand that it is difficult to do much to prevent a great deal of the noise, but surely

at night some sort of consideration towards the large number of invalids might be shown. Hooters were blown incessantly—all sorts of strange hooters, making all sorts of weird noises. The question of silencers was entirely disregarded. Speeding up the engines while going through the low gears and starting, after signal lights had held up the vehicle, was carried to the *n*th degree. I had the feeling that there were a great many young people dashing about, no doubt on their lawful occasions, in very antiquated cars, who wished to draw attention to what fine fellows they were (and what ancient vehicles they were driving!) by making a quite unnecessary noise.

I feel certain that if sufficient medical backing were given to the gravity of this nuisance there would be practically no opposition in the House of Commons to the passing of measures which would inflict such penalties that this sort of thing woud be stopped. But it would be of very little use taking this question up unless one were assured of the support of the medical profession. Unfortunately in the House we have very few doctors who could speak on the subject, but, as I have said, I am certain that all Members would lend a sympathetic ear to any suggestion to put an end to the state of things which exists, and would assist in the rapid passing of any Bill which had the prevention of this nuisance as its object.—I am, etc.,

N. STEWART SANDEMAN.

House of Commons, July 12.

Universities and Colleges

UNIVERSITY OF OXFORD

In congregation on July 17 the following medical degrees were conferred:

D.M.—J. A. Boycott, Ella J. Cockram.

B.M.—J. Mason, M. A. Partridge, C. B. I. Willey, I. F. Rose, B. M. Thornton, R. B. Niven, A. F. Smith, J. L. Reid, W. Wynne Willson, A. L. Young, J. B. M. Green, Alice J. M. T. Barnes, Jean M. Sherring, Rebecca Billig.

UNIVERSITY OF CAMBRIDGE

The E. G. Fearnsides Scholarship, of the value of £100, offered in alternate years for the encouragement of clinical research in organic diseases of the nervous system, has been awarded to A. M. Barry, M.A., M.B., B.Chir., of Pembroke College.

UNIVERSITY OF LONDON

ACADEMIC POSTGRADUATE DIPLOMA IN MEDICAL RADIOLOGY

The following candidates have been approved:

Eleanor K. Abbot, I. A. Abou Sinna, P. Arunachalam, C. S. Chatterjea, Phyllis M. Fraser, M. I. Ghattas, H. H. Navid, D. W. Smithers, R. C. W. Staley.

LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE

The following candidates have been approved at the examination indicated:

ACADEMIC POSTGRADUATE DIPLOMA IN PUBLIC HEALTH.—J. K. Adranvala, Beatrix H. Bakewell, Lalage R. A. Benham, D. M. Blair, Kathleen G. Brimelow, P. N. Chatterjee, *A. B. Christie, Kitty K. Conrad, J. S. Cookson, Teresa I. M. Craig, Iris M. Cullum, C. F. Cumings, Enid S. Davies, B. K. de Silva, S. Graham, Eva M. Gray, E. H. Harte, R. M. M. Hunter, J. D. Lendrum, S. E. D. Masilamani, B. B. Mukerjee, D. Murray, A. F. S. Perera, Violet M. Spiller, Margaret B. Steel, Tsung-Sing Sze, *J. W. P. Thompson, A. F. Turner, V. M. Vatve, Sarah C. B. Walker, L. A. F. Wiles, Isabel A. M. Woods.

* Awarded a mark of distinction.

UNIVERSITY OF MANCHESTER

The following appointments have been made: Dr. E. L. Patterson as assistant lecturer in anatomy; Dr. Margaret I. Williams as assistant lecturer in applied physiology; Drs. D. D. Cranna, D. A. Richmond, and F. W. Smith as demonstrators in anatomy; Dr. John Yule as clinical lecturer in infectious diseases; Dr. Harold Simms as honorary dental surgeon; Drs. J. C. Bramwell, Stanley Hodgson, and Mr. E. E. Hughes as members of the Board of the Faculty of Medicine.

UNIVERSITY OF DUBLIN

SCHOOL OF PHYSIC, TRINITY COLLEGE

The following candidates have been approved at the examinations indicated:

M.D.—A. J. O'Connor, J. B. Patrick, H. T. Ryan, W. C. Sloan.

FINAL MEDICAL EXAMINATION.—*Part I, Materia Medica and Therapeutics, Pathology and Bacteriolgy:* *M. O'C. Drury, *F. L. Willington, †Sylvia M. Hall, †C. B. Robinson, †M. E. Tapissier, †F. de B. Whyte, †R. G. P. Heard, †E. G. Hobart, †R. S. W. Baker, †Katherine Dowling, †W. A. J. Pike, W. B. Dennehy, E. G. Millar, C. J. Du Preez, Muriel Bannister, J. K. Craig, N. J. Hogan, J. C. G. Moore, A. C. Corbett, N. C. Brown, W. F. Carpenter, C. W. Bradfield, M. Daly, J. L. Handelman, J. C. de R. Sugars, Patricia D. Concannon, J. P. Gore-Grimes, D. A. Huggard, G. A. Anderson, Lucia M. E. FitzGerald, E. Cullen, J. W. Boland, C. H. Rutherford. *Part II, M.B.:* †M. C. Brough, †C. Mushatt, J. A. Strong, F. C. Heatley, Grace M. Wild, M. C. Wood, C. Cunningham, J. N. G. Drury, J., E. Gillespie, J. C. Lambkin, J. G. Nixon, H. J. Walker, E. M'G. Cochrane, S. G. Heaton, H. F. T. MacFetridge, A. D. Parsons, R. Pollock, G. N. MacFarlane, J. H. Mitchell, Jasmine Taylor, Patricia M. J. Conway, J. M'C. Caldwell, R. E. Taylor, J. B. Plews, Maureen N. S. Mason, E. G. Fox, Stella M. Coen, Frances M. C. Wolfe, C. M. Ludlow, J. Freedman. *B.Ch.:* *R. Pollock, †J. A. Strong, †G. N. MacFarlane, †H. M. Carson, †H. J. Walker, †J. E. Gillespie, †W. Hayes, H. F. T. MacFetridge, M. C. Wood, R. E. Taylor, R. W. Duncan, M. C. Brough, F. C. Heatley, H. FizG. Sloan, E. R. N. Cooke, C. Eppel, E. G. Fox, C. Cunningham, J. C. Lambkin, C. J. S. Flood, J. H. Mitchell, Jasmine Taylor, G. K. Donald, W. J. G. Warwick, A. D. Parsons. *B.A.O.:* *C. H. Blackham, †R. C. H. Cooke, †W. Jones, †H. M'V. Buchanan, †W. J. E. Pietersen, †Maureen N. S. Mason, †M. D. Thorp, †J. M'C. Caldwell, †Frances M. C. Wolfe, T. Fallon, J. E. Murphy, F. J. B. Convery, B. W. Hughes, N. M'Sharry, J. F. Rishworth, L. A. S. Edmondson, N. Marks, M. D. M. Bergin, Bridget P. Mansfield, J. T. Speidel.

DIPLOMA IN GYNAECOLOGY AND OBSTETRICS.—R. Sinha, D. P. Harris, K. Narulker, D. Wazalwar, Elizabeth A. Akerele.

DIPLOMA IN PUBLIC HEALTH.—*Part I:* J. D. Murray. *Part II:* T. A. Austin, S. G. Rainsford, R. L. G. Proctor, H. W. Dalton, Mary S. Miller.

DIPLOMA IN PSYCHOLOGICAL MEDICINE.—*Part I:* D. T. Bardon.

The following prizes have been awarded:

Dr. Henry Hutchinson Stewart Medical Scholarships: Physics, Chemistry, Botany and Zoology, G. B. Gibson. Anatomy and Physiology, W. E. O'C. C. Powell. Mental Disease, D. T. Bardon, M.B. *Medical Scholarships:* Physics, Chemistry, Botany, and Zoology, J. R. Hassard. Anatomy and Physiology, H. H. Balch. *Fitzpatrick Scholarship:* G. N. MacFarlane. *Daniel John Cunningham Memorial Medal and Prize and John Mallet Purser Medal:* W. E. O'C. C. Powell. *Aquilla Smith Prize:* M. O'C. Drury. *Walter G. Smith Prize:* A. H. Isaacson. *Conolly Norman Medal in Mental Diseases:* M. C. Wood. *Medical Travelling Prize and Banks Medal:* G. J. Dixon, M.B. *De Renzy Centenary Prize:* T. A. Austin, L.R.C.P. and S.I.

* First-class honours. † Second-class honours.

QUEEN'S UNIVERSITY, BELFAST

The following candidates have passed in the subjects indicated:

M.D.—*W. M. Loughridge, *A. Lynn, *R. S. Cromie, D. J. C. Dawson, J. D. Hardy, W. D. Hughes (*in absentia*), M. Jeffers, J. K. M'Collum, T. A. C. M'Quiston, B. M. Maxwell, J. V. Wilson.

M.B., B.CH., B.A.O.—†A. C. Glendinning, †J. Harper, †J. W. S. Irwin, †J. W. Millen, †M. G. Nelson, C. T. B. Adams, Jean E. Allen, H. Arthur, A. S. Baker, Evelyn Bennett, D. Black, D. J. Blumberg, I. A. J. Blyth, A. M. Boyd, Ruth C. M. Brown, W. Calwell, S. H. Carson, Wilhelmina M. Craig, H. J. Doran, F. Dornan, W. H. Fee, Julia M. Ferriss, R. C. Fraser, S. J. G. Gilmour, J. E. Glasgow. J. A. H. Henderson, N. C. Hughes, E. F. G. James, M. I. Kaplan, H. Kennedy, T. A. King, Mary E. Loan, J. Lightbody, F. D. Lord, J. A. Macaulay, Grace E. M'Clafferty, J. M. M'Closkey, J. M'Murray, R. A. E. Magee, Annie W. Megaw, R. J. Mitchell, F. J. Murray, J. A. O'Connell, J. W. B. Paton, Eileen E. Perry, M. I. Robinson, T. L. Ross, Kathleen E. Shannon, J. S. S. Thompson, J. B. Upton, D. G. C. Whyte, E. L. Wilson, G. N. Wilson, K. S. Wilson, W. R. Wright.

* With commendation. † Second-class honours.

C. Uggeri (*Arch. ital. Chir.*, 1937, **49**, 4, p. 361) states that while he found it impossible to produce aneurysms either in animals or man as the result of a single trauma, he succeeded in producing an aneurysmal sac with fibrinous walls in dogs after repeated attempts. According to him, sacs of this kind are not due to distension of the vessel by a thrombus occluding the arterial wound, but are the result of thrombotic deposits within the clots.

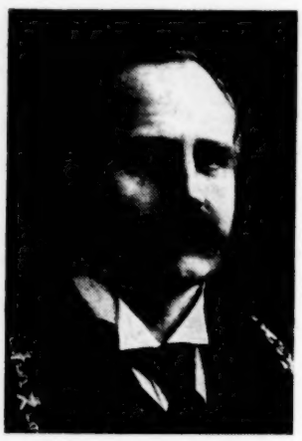
Obituary

SIR THOMAS MYLES, C.B., M.D., F.R.C.S.I.

Consulting Surgeon, Richmond Hospital, Dublin

We regret to announce the death at his home in Leeson Park, Dublin, on July 14, of the distinguished surgeon Sir Thomas Myles, a former President of the Royal College of Surgeons in Ireland.

Thomas Myles, son of John Myles of Limerick, was born on April 20, 1857, and studied medicine at Trinity College, Dublin, graduating M.B., B.Ch. in 1881, afterwards proceeding to the M.D. degree with distinction. In 1885, on becoming F.R.C.S.I., he was appointed secretary of the Dublin Hospitals Commission, having previously served as house-surgeon at Steeven's Hospital. In 1889 he was appointed professor of pathology at the Royal College of Surgeons, afterwards acting as examiner in surgery and occupying the presidential chair in 1900–2. He was for many years visiting surgeon to Jervis Street Hospital and to the Richmond Hospital. He received the honour of knighthood in 1902 and represented his College on the General Medical Council from 1905 to 1911 and again from 1933 until the time of his death.



Sir Thomas Myles was an honorary surgeon to the King in Ireland throughout the reign of his late Majesty, and medical referee for the Treasury in Ireland. On the outbreak of war he was appointed consulting surgeon to the Irish Command with the temporary rank of lieut.-colonel, R.A.M.C. He was promoted colonel, A.M.S., and created C.B. in 1917.

Sir William I. de C. Wheeler sends the following appreciation:

The death of Sir Thomas Myles leaves a blank not only in the ranks of the medical profession in Dublin but amongst a large community of friends and old pupils at home and abroad. Apart from professional ability of a high order, his intellectual and physical vigour aroused the interest and admiration of all who knew him. "Tom" Myles was a striking personality; it is difficult to picture his surroundings in his absence. He was a staunch and loyal friend. He was gifted with a vivid memory, his knowledge of literature was deep from endless reading, and as a speaker he was impressive and amusing. In discussions and debate he baffled opposition; in the end his views usually prevailed.

I knew him intimately for over forty years. First as a child, then when I was a medical student, and afterwards in close friendship in the many activities of surgical life. The help and encouragement he gave to juniors were whole-hearted and unstinted. A few weeks ago I had a letter recalling memories and mingling the old robustness with characteristic humour. As a young man he devoted a considerable amount of time to the study and teaching of anatomy. His memory was such that to the end of his active years he was able to recite the anatomical relationships in almost any region of the body. In addition, while still young, he became professor of pathology in the Royal College of Surgeons Medical School. With this strong foundation, reinforced by his personal magnetism, he built up an extensive surgical practice and became recognized as one of the most successful teachers of his day. His lectures at the Richmond Hospital attracted large classes. The students remained his disciples in after-years. He became President of the Royal College of Surgeons and was its representative on the General Medical Council at the time of his death. During the war he served the Army Medical Administration with ceaseless energy; his close friends were Lord Moynihan, Sir Robert Jones, and the Director-General, Sir Alfred Keogh.

In conversation "Tom" Myles made a point of avoiding professional topics. He delighted his friends with apt quotations from Shakespeare or from the many modern writers with whom he was so familiar. His company was sought on all sides, his companionship was instructive and entertaining. In the realm of sport he was equally conspicuous. He told of his adventures as an amateur heavyweight boxer. In later years he became an enthusiastic yachtsman; he seldom missed a Rugby football match of major importance. His surgical writings and operative work now belong to a past generation; they are still worthy of study. Notwithstanding all these qualities his intimate friends will remember him best by the charity and sympathy which followed him to the bedside of his hospital patients. He had retired from active surgical practice, but although handicapped by some deafness he retained that commanding and unconventional personality which made him an outstanding figure in whatever circle he moved.

He raised to a higher level everything he touched. Mediocrity and commonplace in his hands reached efficiency and respect. He set a great example. No one in our time can hope to replace him.

Sir Robert H. Woods writes from Dublin:

By the death of Thomas Myles Ireland has lost one of her most remarkable men. Though he won his fame as a surgeon surgery was only one of his many activities. He was interested in all things human. His retentive memory, fed by omnivorous reading, rendered him a veritable storehouse of information which he was at all times ready to impart; and there were few subjects of discussion on which he could not deliver a mature and enlightening opinion. In Baconian phrase he was full, ready, and exact. He had an intrepid mind that broke through the entanglements of catchwords and phrases, and arrived at what appeared to him to be the truth with wonderful ease. The vigour of his expositions sometimes vexed less independent minds, but he was never gratuitously offensive, and his points were made with as much modesty as the importance of the subject seemed to allow. Mentally as well as physically he was a big man, and no one could talk to him without knowing it. With the strength of a giant he was never tyrannous. Like a good boxer, he could hit hard and straight, but he was utterly devoid of petty jealousy, and was never known to bear malice. He never forgot a friendly act nor desired to remember an unfriendly one. He had a complete and good-humoured tolerance for those whose views differed from his, and in an intimacy of over fifty years I never knew him to be out of temper. Shakespeare was his favourite author, and few men of his time could compete with him in his textual and critical knowledge of the plays.

His knowledge of modern history was vast, and he could talk equally well on classical and current literature.

He scored his first success as a "grinder," and no one who was privileged to be a member of his class could easily forget the clearness of his explanation of a difficult subject. A born teacher, his enthusiasm made hard work attractive. But hard work under his tuition never connoted drudgery. Like the Great Playwright, he understood the value of comic relief in the middle of strain too well to repress an occasional flippancy during his grinds; and indeed he more often himself led the laughter by some ludicrous comparison or quaint turn of phrase that helped to fix the lesson more effectively. So much was this the case that none of us missed a grind if we could possibly attend, for we knew that the fun would more than compensate for the toil.

I was his colleague for fifteen harmonious years from 1891. At that time asepsis was beginning to displace antisepsis in theatre work, and Myles was one of the pioneers of the newer method. He was the first surgeon that I saw using gloves; they were of cotton, for rubber had not yet come into use. His first sterilizer was a fish-kettle on the kitchen fire of the old Richmond Hospital, to the amazement of the cook, who supposed that he "wanted to soften the instruments." I think it was he, though it may have been his fidus Achates, Richard Lane Joynt, who at this time perpetrated the delightful parody of Polonius: "And boiling dulls the edge of cutlery." Even to the end the boy was never lost in the man, and an after-dinner speech from him was a delight. Up to a short time before his death he seemed to have discovered the secret of perpetual youth, for his intellect was as clear and his bodily strength as vigorous as that of most men of half his age. We shall not look upon his like again.

Mr. A. B. Mitchell writes from Belfast:

A very great Irishman has gone to his long rest. Sir Thomas Myles was an outstanding personality in any company. His conversation was always fascinating because of the extraordinary range and accuracy of his knowledge and the simplicity and forcefulness with which he expressed himself. His acquaintance with history was profound. He was one of our greatest Shakespearian scholars, and constantly quoted his favourite author with a fervour and suitability that was most impressive. He was endowed with a colossal memory. He was a voracious reader. A book once read was mastered; he could refer to its individual characters years afterwards as if he had lived and moved amongst them. His wonderful capacity as a teacher of medicine and surgery will never be forgotten till his last pupil has gone to join him in the "Everlasting Land." It is not too much to say that one's first visit to "Tom Myles's Grind" was a revelation. The lucidity, brevity, accuracy, and virility of his descriptions of disease were altogether unique. He prepared more than 1,000 young men for various medical degrees, and for entrance examinations for the Army, Navy, and Indian Medical Services. His pupils have attained the foremost positions in every part of the British Empire. Wherever they went they carried with them not only profound admiration but a deep affection for their great teacher. It is impossible to overestimate his influence upon the lives and character of those who came under his magnetic personality. Others will deal with his skill as a surgeon; I have confined myself to some personal characteristics of my beloved teacher and lifelong friend.

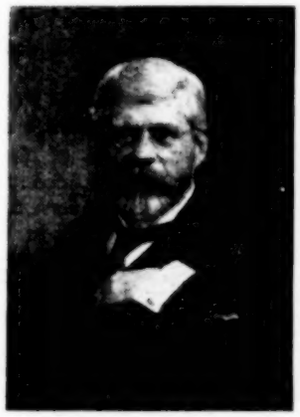
[The photograph reproduced is by Lafayette, Dublin.]

WILLIAM LANG, F.R.C.S.

Consulting Ophthalmic Surgeon, Middlesex Hospital; Consulting Surgeon, Royal London Ophthalmic Hospital

We regret to announce that Mr. William Lang, the veteran ophthalmic surgeon, died on July 13 at the age of 84. He retired from practice some ten years ago, but continued to live in Cavendish Square.

Born at Exeter on December 28, 1852, the youngest son of Isaac Lang, he was educated privately and at the London Hospital, where he held the posts of house-physician, house-surgeon, demonstrator of physiology, and demonstrator of anatomy, after qualifying as M.R.C.S. in 1874. While at the London he came into close touch with James Edward Adams, the ophthalmic surgeon, and this was the beginning of a long and fruitful career in the diagnosis and treatment of eye disease. Lang became a Fellow of the Royal College of Surgeons in 1879, and five years later, when Adams resigned from the staff of the Royal London Ophthalmic Hospital (Moorfields), he was elected to the vacancy. About the same time he was also appointed ophthalmic surgeon to the Middlesex Hospital, and at these two institutions he exerted a powerful though quiet influence on young eye surgeons. On his resignation from Moorfields in 1912 he was appointed consulting surgeon. Those who had the advantage of being trained by William Lang will recall to memory his *Methodical Examination of the Eye*, a book which was "the ophthalmological Bible of their junior days." It came out in 1895 and was labelled Part I; all who worked in his clinic at Moorfields or the Middlesex looked forward to the publication of the remaining part or parts—but none ever appeared. He was also a pioneer in the conception of focal sepsis. Many years ago he taught that iritis commonly had its origin in some focus of inflammation elsewhere in the body.



William Lang had a cultivated taste in books and pictures, but was reticent and retiring. In the days when he lived at Chiswick he enjoyed the friendship of William Morris and his group, and bought the volumes from the Kelmscott Press as they came out. He was twice married and had a son and a daughter. The son, Basil Thorn Lang, F.R.C.S., died early in 1928 at the age of 47. He was an ophthalmologist of exceptional ability and a man of great originality of mind and mechanical inventiveness.

We are indebted to Sir Arnold Lawson for the following appreciation:

I doubt if there is anybody who can claim so intimate and so long an acquaintance with William Lang as myself. I first came into contact with Lang as one of his out-patient dressers at Middlesex Hospital. Later on I was his house-surgeon at the same hospital, and subsequently, until my election to the staff at Moorfields, I was his chief clinical assistant at Middlesex. Then I became his colleague on the staff of Middlesex as well as at Moorfields, and all this means that I was in close touch with his work for a great number of years. I am glad to

write some notes about Lang. He was my first teacher in ophthalmology, and I owe a great deal to him. There are many who, like me, could say much about his work, but nobody who could say it with a greater reverence or a greater appreciation of his very high qualities.

Although Lang was essentially a "Middlesex man" he received his early training at the London Hospital, where he entered as a student in 1870. There he served as house-surgeon and house-physician, and for a time was a demonstrator in anatomy and physiology. In 1879 he took his Fellowship at the Royal College of Surgeons, and in 1881 he was elected ophthalmic surgeon and lecturer on ophthalmology to the Middlesex Hospital. This post he filled with great distinction until 1914—a period of thirty-three years—when, owing to the age limit of 65, he retired from the active staff and was elected consulting surgeon to the hospital. In 1884 Lang was elected assistant surgeon to the Royal London Ophthalmic (Moorfields) Hospital, and in due course became full surgeon, serving in that capacity until 1912, when he was elected to the consulting staff of the hospital. At Moorfields the age limit is somewhat younger than at Middlesex, and it was on this account that he retired from active work at Moorfields rather earlier than he did at Middlesex.

Lang was one of the original 113 members of the Ophthalmological Society of the United Kingdom, a band of pioneers in modern ophthalmology who formed themselves into a society in 1880 under the presidency of Sir William Bowman. Many distinguished names, since writ large in the annals of ophthalmology, are to be found in the list of original members, and that of William Lang will be numbered among them. Lang was one of the last two survivors, and his death leaves only Sir Lindo Ferguson to represent the founders of the society. Lang always took a keen interest in the work of the society and wrote many articles in the annual *Transactions*, retaining his membership to the last. He was a vice-president of the society, and in 1903 acted as president during the interregnum caused by the death of Dr. David Little, who was president at that time. Lang was a prominent member of the Ophthalmological Section of the Royal Society of Medicine, and was one of its early presidents, contributing much to the discussions and evincing great interest in the welfare of the Section.

Lang was essentially a great clinician. He wrote many papers recording his experiences in a diversity of subjects appertaining to the eye, and in this respect will probably be best remembered by his early recognition of the importance of focal sepsis in the aetiology of chronic inflammatory conditions of the eye. He was always an advocate for massive doses of vaccines, and was accustomed to commence proceedings with a dose which would startle a good many bacteriologists nowadays. Undeniably, however, he met with a large measure of success in many cases which had resisted all the usual remedies. His contributions to the technique of ophthalmic surgery were considerable. Although he laboured under difficulties engendered by a marked tremor of the hands he was a beautiful operator, and the tremors always ceased when he was about to do something which required particular accuracy and delicacy of touch. In point of fact these tremors had nothing to do with what are commonly known as "nerves." I remember very well at the time of the great International Medical Congress in London before the war there was to be a large gathering of European ophthalmological professors to see our work at Moorfields. All we younger surgeons were rather shy of exhibiting our prowess under the close scrutiny of learned foreigners—for of course in the operating theatre at Moorfields all onlookers are very close indeed to the operating surgeon. Lang, however, was delighted to be showman, and gave a most masterly exhibition of beautiful handiwork, which was the more remarkable because of the doubts which were uppermost in one's mind before he really started. Lang had a mechanical mind, too. His eye speculum, which guarded the lashes and kept them out of the field of operation, found instant favour, and is in general use now. Also he introduced twin knives for the division of anterior synechiae which have not been surpassed. He was interested in the treatment of lachrymal troubles, and his lachrymal syringe and blunt dissector and scoop are well known. But perhaps his best-known contribution to the mechanical side of surgery was his advocacy of inserting an artificial globe into Tenon's capsule after enucleation as a means of preventing the deformity following on the shrinkage of the orbital tissues and so permitting good movement of the artificial eye. Lang was led to introduce this operation because of the fear of sympathetic uveitis that haunted Mules's operation of evisceration of the contents of the globe and placing a prothesis on the ocular stump. This operation was, however, received with mixed favour. I believe it to be perfectly free from danger of sympathetic inflammation in the other eye myself, but others were not so favourable, and there proved to be considerable difficulty in keeping the artificial globe in a central position. After a time there was apt to occur a certain displacement, which negatived to some extent the usefulness of the operation, and sometimes made necessary the removal of the globe.

Lang was a splendid teacher. He was fond of the students—dear boys, as he habitually called them when trying to instil the elements into the usual mixed crowd of out-patient men. He had an arresting and genial personality which insisted on and commanded attention from even the dullest of them. One *had* to learn when Lang wished it, for otherwise there was a gentle sarcasm handed on to the unhappy man which caused general amusement to the onlookers and made the recipient very conscious of his futility. He was a very hard and conscientious worker himself and expected the same from his assistants, being very appreciative, however, of work well done. He was a very keen observer, and this, with his attention to detail, brought him great success in his private practice. I can certainly say that few people who consulted William Lang ever transferred their cases to another specialist. He would enter on a dull case of refraction with the same complete attention to detail as he would give to more interesting work, with the result that he inspired great confidence in all his patients in both his hospital and his private practice.

Socially he was not athletic, but he was fond of golf and took great interest in golf matches between the staff and the students at Middlesex, presenting a most beautiful bronze statuette of an athlete as a trophy for an annual competition. His golf was not of a high order, but he thoroughly enjoyed it, and a match with him when the opponent, like myself, was indifferently bad was always a keen and amusing affair. Lang hated public speaking, and especially avoided after-dinner speeches whenever he could. When we gave him a great dinner on his retirement from the active staff of Middlesex he had of course to make a speech of thanks, the thought of which disturbed him so much that we had quite a difficulty in getting his consent to the dinner.

Lang's later life was clouded with much sorrow. He married twice, and his second wife predeceased him by

many years. By his first wife he had a son and daughter. His only son, Basil, was brilliantly clever, and, following in his father's footsteps, was eventually elected to the staff at Moorfields only to die a few short years later from pneumonia at a time when his prospects were of the brightest. Lang felt his son's death very keenly, and soon afterwards began to exhibit symptoms of the long pathetic illness which eventually brought his life to a close. For several years he was comforted by the complete and marvellous devotion of his daughter, who literally gave her life to helping him and to soothing his failing powers.

Dr. AUGUSTUS ROLLO BALMAIN, deputy M.O.H. for Ilford, died from a sudden heart attack while motoring in the Rhineland with his wife; the funeral took place at the village church of Hockering, outside Norwich. Dr. Balmain graduated M.B., B.S.Lond. in 1916, and took the D.P.H. of Oxford in 1920. After studying at Birmingham and the Middlesex Hospital he held house appointments at the Birmingham General Hospital, and was formerly assistant M.O.H. for Colchester and Birkenhead, and county oculist and assistant school medical officer for Somerset. During the war he served with the 14th C.C.S. in the East African Expeditionary Force. He obtained the M.D. in 1929. Dr. A. H. G. Burton, M.O.H. for Ilford, writes: Dr. Balmain was a modest, unassuming, retiring man, and probably only his immediate chief understood his worth. He came to Ilford in 1927 with the highest recommendations from his previous medical officers. He had a fine knowledge of modern medical work, and was himself a doctor whose opinion could be implicitly relied upon on any medical matter. He had charge for some years of the diphtheria immunization clinics and of the open-air school, and was inspector of nursing homes and of massage establishments in Ilford. In addition he collaborated with me in a good deal of research work and case recording which would have been impossible for me to carry out without his assistance. We published together seven articles, which appeared in the *Lancet* between 1928 and 1931. At the time of his death we were considering the possibility of the scientific estimation of the value of the open-air school, and the reason why it benefits some children and not others. Some preliminary work had already been done, but it will have to be left for another hand to complete it. Dr. Balmain was a loyal colleague, ever anxious to assist any members of the staff whom he was able to help. He carried himself gallantly through the great war, serving in the East African Expeditionary Force throughout in spite of many attacks of malaria, and remained as captain in the R.A.M.C. Special Reserve.

Dr. DANIEL BARTHOLOMEW FOLEY, who was for many years in practice at Wombwell, Yorkshire, died recently at Southport, aged 72. He studied medicine at Queen's College, Cork, obtaining the L.R.C.P. and S.Ed. and L.R.F.P.S.Glasg. diplomas in 1889, and soon afterwards entered into partnership with his brother, the late Dr. James Foley. After some forty years as pit doctor at Darfield Main Colliery, during which he was prominent in ambulance work, Dr. Daniel Foley retired to Southport in 1931, and the Wombwell Urban District Council gave his name to one of the thoroughfares on its new housing estate in recognition of his public services to the district. He had been a member of the British Medical Association for thirty years.

Dr. ROBERT HARGREAVES, a Sheffield medical practitioner, collapsed while driving his car in one of the busiest central thoroughfares of the city on July 12, and died a few minutes later, before admission to the Sheffield Royal Hospital. Dr. Hargreaves was born in 1891, and studied medicine at Cambridge and University College Hospital, graduating B.A. in the Natural Sciences Tripos and afterwards obtaining the M.R.C.S. and L.R.C.P. diplomas. During the war he was medical officer to the 9th Battalion Royal Fusiliers with the rank of Captain R.A.M.C.(T.), and at the end of 1918 he took over his father's practice. He was a member of the Sheffield Medico-Chirurgical Society and joined the British Medical Association twenty years ago.

Dr. HENRY WILSON died at Cheadle, Cheshire, after a long illness, on June 25 in his seventy-ninth year. A student of Owens College, Manchester, he obtained the M.R.C.S. diploma in 1881, and after serving as house-surgeon at the Manchester Royal Infirmary, and senior resident medical officer at St. Mary's Hospital, Manchester, he settled in practice at Cheadle. Dr. Wilson was a justice of the peace for the county of Chester, a past-president of the Stockport Medical Society, and a member of the Manchester Pathological and Medical Societies. He joined the British Medical Association as long ago as 1884.

Medical Notes in Parliament

On July 13 the Local Government Superannuation (Scotland) Bill was before the House of Commons. On a motion for third reading Rear-Admiral Beamish drew attention to Clause 12 which, he said, discriminated against voluntary service counting for service with a local authority. The people who voluntarily served in the Forces of the Crown in the war and, again voluntarily, extended their service after the armistice, were, under the Bill, excluded from counting for pension their period of military service. Dr. Elliot said that it was the intention of the Government to recommend the insertion of an amendment in the House of Lords to extend the period during which service with the Forces should count from November 11, as now in the Bill, to December 31, 1920. The Bill was read the third time.

In the House of Lords on July 19 the Local Government Superannuation Bill passed through committee, and the Local Government Superannuation (Scotland) Bill was read a second time. The Finance Bill was read a first time.

In the House of Lords on July 19 the Summary Procedure (Domestic Proceedings) Bill and the Cinematograph Films (Animals) Bill were read the third time and passed.

In the House of Lords on July 19 the Royal Samaritan Hospital for Women Glasgow Order Confirmation Bill passed through the report stage.

In the House of Lords on July 20 the Royal Samaritan Hospital for Women Glasgow Order Confirmation Bill was read the third time and passed. Later that day the Bill was received in the House of Commons.

The House of Lords this week discussed the report of the Royal Commission on Palestine. The report stage of the Factories Bill was set down for July 22. In the House of Commons there were debates on Palestine, foreign affairs, the Milk Amendment Bill, and the Estimates for the Department of Health, Scotland.

On July 20 the Royal Assent was given to the Livestock Industry Act.

In the House of Commons on July 20 the Milk (Amendment) Bill passed through Committee.

Supplementary Estimates published on July 20 include £85,000 additional grant to the Diseases of Animals Account in respect of tuberculosis in cattle, and of £1,500 for other diseases in cattle, making the total grants for diseases of animals services in 1937

£287,610. Contributions towards the expenses of the Milk Marketing Board in increasing the demand for milk in England and Wales are raised from £240,000 to £430,000. The similar vote in Scotland is increased from £42,500 to £60,500. These votes will be partly used in compensation in respect of milk sold at reduced prices for consumption by special classes of persons. A Supplementary Estimate of the Board of Education includes £158,000 for grants under the Physical Training and Recreation Act.

Factories Bill

The House of Lords, on July 12, went into committee on the Factories Bill. On Clause 20 (Cleaning of machinery by women and young persons) Lord BERTIE OF THAME moved to allow the cleaning of machinery by these classes of workers with the special consent of the Home Secretary. He said this might be advisable in an emergency such as war. The EARL OF MUNSTER, in resisting the amendment, said that from 1931 to 1935 accidents to women and young persons through cleaning machinery numbered 3,758. The amendment was withdrawn.

On Clause 27 (Precautions in places where dangerous fumes are liable to be present) the EARL OF LISTOWEL moved to provide that men working under dangerous conditions in confined spaces should in all cases wear a suitable breathing apparatus. The EARL OF MUNSTER said workmen found such an apparatus extremely uncomfortable and hampering to their movements. The provisions in the clause had been worked out with technical advisers and did not dispose men working in these confined spaces to any risk whatsoever. The amendment was withdrawn.

WASHING FACILITIES: NEW CLAUSE

Clause 42 (Washing facilities) was withdrawn on the motion of EARL DE LA WARR, and on the motion of the EARL OF MUNSTER the following new clause was substituted:

> "(1) There shall be provided and maintained for the use of employed persons adequate and suitable facilities for washing, which shall be conveniently accessible and shall be kept in a clean and orderly condition.
>
> (2) The Secretary of State may by regulations prescribe, either generally or as respects any class or description of factory or as respects the persons employed in any process, a standard of adequate and suitable washing facilities.
>
> (3) The Secretary of State may by regulations exempt any class or description of factory from the requirements of this section, where he is satisfied that, having regard to the special conditions under which work is carried on, compliance therewith would be unreasonable, and the superintending inspector for the division may by certificate exempt, subject to any conditions specified in the certificate, a factory from the requirements of this section where he is satisfied that, having regard to the special circumstances of the factory, compliance therewith would be unreasonable.
>
> (4) This section shall come into operation on July 1, 1939, provided that, as respects persons employed in any process in which lead, arsenic, or any other poisonous substance is used, or any process prescribed by the Secretary of State, being a process liable to cause dermatitis or any other infection of the skin, this section shall come into operation at the commencement of this Act."

Lord STRABOLGI remarked that under the new clause two years had to elapse except in especially poisonous occupations. Two years were not required for fitting up washing facilities and he hoped the matter would be looked into. The EARL OF MUNSTER said that in many factories it could not be done before that date. In reply to Lord ADDISON he promised to consider, before the report stage, whether the words "of the skin" in the last line but one of the amendment should be deleted in order to cover a case which had occurred during the war, when it was found that a considerable percentage of T.N.T. poisoning was caused not through the skin but because people from the factories put their stained hands to their mouths.

On Clause 49 (Protection of eyes in certain processes) an amendment was accepted on the motion of the EARL OF MUNSTER empowering the Home Secretary to direct the use of screens instead of goggles where this was desirable.

On Clause 54 (Basement bakehouses) Lord FARRINGDON moved a proviso that such bakehouses should in no cases be used after the expiration of five years from the date of the passing of the Act. He said it was impossible that premises used for baking underground could be hygienic. The temperatures in these places were terrific. Modern ovens were of metal and of no great weight and therefore could be moved to other positions without much difficulty. Notice of the intention to abolish underground bakehouses had been given in 1891. The EARL OF MUNSTER said nearly all the basement bakehouses which still existed were occupied by small concerns, and these small concerns were rapidly disappearing. The Government was satisfied that by the clause as it stood it was providing proper hygienic and sanitary conditions in bakehouses, and it was not prepared to end the life of the smaller classes of master bakers five years hence. The amendment was negatived. Lord FARRINGDON moved to insert a new clause prohibiting night work in bakehouses. After discussion the new clause was rejected by 34 to 9 on the ground that an inquiry set on foot by the House of Commons into night baking was not yet complete.

WORKING HOURS OF WOMEN AND JUVENILES

On Clause 70 (General conditions as to hours of employment of women and young persons) the EARL OF LISTOWEL moved to insert "it shall be unlawful for a young person under the age of 15 years to be employed in a factory." The amendment was defeated. On the same clause Lord FARRINGDON moved to substitute 40 hours for 48 hours as the maximum working week for women and young persons. The EARL OF MUNSTER said it must be remembered that it was at present legally permissible to employ persons for 60 hours a week in non-textile and 55½ hours a week in textile occupations, and the Bill laid down that legal maximum hours of employment in all factories should not exceed 48 in one week. The proposed reduction to 40 hours would result in dislocation of industry and heavy loss of production. The amendment was rejected.

Lord ADDISON moved to reduce the maximum working spell permitted without a break for women and young persons from 4½ to 4 hours. He said that during the war he had appointed a Committee on Fatigue which was succeeded by a Committee on Industrial Fatigue. These presented reports which, without exception, supported the principle that 4 hours was enough as a continuous spell of work. The amendment was negatived.

On Clause 71 (Reduction of weekly hours of work of young persons under 16) the BISHOP OF WINCHESTER moved to reduce these hours from 44 to 40. Lord ASKWITH supported the amendment. He said that the hours of work which were laid down at present for such young people were too long, and the young persons had no chance of success for keeping their bodies fit and their minds clear. After a long discussion the amendment was negatived.

On Clause 109 (Employment of women and young persons in places other than factories in processes connected with lead manufacture or involving the use of lead compounds) an amendment was inserted on the motion of the EARL OF MUNSTER applying the clause to all persons who had not attained the age of 18.

Further drafting amendments were made, the schedules were agreed to, and the committee stage was concluded.

Marriage Bill

In the House of Lords on July 15 the Marriage Bill was considered on report. Lord MOYNE moved to omit Clause 1 (No divorce within three years of marriage and provision for cases of special hardship). After debate the motion to omit was defeated, and Clause 1 was retained with the amendment made in committee of the House of Lords reducing the period of delay from five years to three years. Minor amendments were also made in the clause on the motion of Lord Maugham.

RECURRENT INSANITY

On Clause 2 (Grounds of petition for divorce) Lord DAWSON OF PENN moved an addition to Subsection (*d*). This subsection

ran: "Is incurably of unsound mind and has been continuously under care and treatment for the period of at least five years immediately preceding the presentation of the petition." Lord Dawson moved to add at the end of this paragraph: "Or whose unsoundness of mind is established to the satisfaction of the Court to be of the recurrent type, provided that no petition can be presented until five years have elapsed since the respondent was first declared to be of unsound mind." Lord Dawson said his amendment referred to what he might call "shuttlecock cases"—patients who were in and out of an asylum all the time. It was not rare to find that one spouse had been in and out of an asylum ten times in twenty years, but not necessarily for the continuous period of five years. The cyclical cases were peculiarly distressing. They went back to their homes convalescent, but by no means cured. In the early days the healthy spouse was willing to put up with that, and his amendment suggested that no petition should be presented until five years had elapsed since the first attack of insanity. But after five years, when it was clear to the Court, which would take medical evidence, that this insanity was recurrent and might go on for twenty years, the petition should be favourably considered. The majority of such cases were incurable after the time mentioned in his amendment. It was therefore cruel to compel the healthy spouse after the lapse of a number of years to receive the convalescent patient into the home every time he or she came out of an asylum, and be subject often to treatments and degradations which were particularly felt in small homes. That the patients would know they were liable to be divorced would have no influence whatever at a late stage in these recurrent cases. Asked by Lord ATKIN what he meant by "first declared to be of unsound mind," Lord DAWSON said he meant certification, and he would rather have the phrase "full certification."

Lord GORELL said Lord Dawson was clear in his own mind as to the meaning of the recurrent type, but to anyone who was not a skilled medical man "recurrent" was a vague word difficult of interpretation. Furthermore the word "declared" introduced difficulty. There was no authority to declare anybody of sound mind.

The EARL OF MANSFIELD said the Bill introduced new dangers in respect of people in institutions and voluntary patients. He was chairman of the directors of one of the Royal Asylums of Scotland with an increasing number of voluntary patients. He was afraid unscrupulous persons would try to get their periodically insane partner certified insane to avoid the financial responsibility for maintenance.

Lord MAUGHAM said the certificate of a single medical man seemed an unsatisfactory way of determining whether the person should be divorced. Those who had experience of lunatic cases knew that some doctors would certify and others would stoutly decline to do anything of the kind.

Lord DAWSON replied that if his form of words was open to objection because it did not adequately fit his intention he was prepared to withdraw his amendment and reserve the right to give a better wording on the third reading. It was right and proper that after five years the scales of mercy should incline towards the afflicted spouse. There was no great evidence that the group to which his amendment referred would in the near future be so cured that they could become normal members of society.

The amendment was negatived.

INSANITY WITHIN TWELVE MONTHS OF MARRIAGE

On Clause 7 (New grounds for nullity) Lord SALISBURY moved to insert after the reference to epilepsy in this clause the words: "Provided that if either party to the marriage shall within twelve months after the marriage become manifestly of unsound mind or mentally deficient, that fact shall be prima facie evidence that such party was of unsound mind or was mentally deficient at the time of the marriage." He said it had happened and would happen again that insanity which was not obvious at the time of the marriage became obvious immediately afterwards, and the question arose of how far that ought to be held to make the marriage null. The amendment prescribed that if insanity became apparent within a certain period of the marriage that should be prima facie evidence—not conclusive evidence—that the consent was not a good one. The period proposed was twelve months, but that was a matter of detail, and if the House thought that too long Lord Salisbury would be glad to consent to a shorter period.

Lord DAWSON said he was afraid it would not be possible to carry out the proposal in the amendment. Some of the most difficult cases of insanity were insanities of pregnancy and childbirth, and twelve months would embrace a number of cases in that group. Many such insanities were curable and were often due to temporary causes, and injustice would be caused if an amendment of this kind were passed. Lord GORELL said the promotors of the Bill thought the difficulties of the amendment too great for it to be accepted. Lord Salisbury withdrew the amendment.

VENEREAL DISEASE

On the same clause in Subsection (*c*), which provides for nullity if the respondent was at the time of the marriage suffering from venereal disease, Lord Dawson had an amendment to insert the word "communicable." Lord ELTISLEY said those in charge of the Bill accepted the amendment. Lord GORELL suggested that the phrase should be "venereal disease in a communicable form."

Lord DAWSON accepted this phrase and moved his amendment accordingly. He said syphilis was not communicable from one spouse to the other, or only very rarely communicable, after a year had elapsed from the time of infection. It often ceased to be communicable quite early. In practice people who had been properly treated were permitted by some authorities to marry one year afterwards, and the very most that others required was two years. After that date, although syphilis might do damage to the person originally infected, it would not do damage by communication to anyone else. This further difficulty arose that there was a blood test for this disease. Suppose, for example, that one of the parties to a marriage was infected five years before the marriage. The disease would not be communicable at the time of the marriage, yet in some instances the blood test remained positive, although at the same time on other grounds it was certain that the disease was not communicable. The paragraph as at present worded might act with great unfairness and bring in confusion. The whole question could be settled by inserting the word "communicable" or "any form which is communicable."

Lord ATKIN asked whether a man could suffer from syphilis in such a way that he might hand it to his children and yet not communicate it to his wife. Voidability of marriage ought certainly to apply to a case where a man suffered from venereal disease which he was capable of handing down to his children.

Lord DAWSON said the blood test on the wife would be part of the evidence which would show that the wife was positive. The broad answer would be that it would be so rare as not to be worth bringing into the Act for a child to be infected without the mother being infected too, certainly as concerned the blood test of each.

The House then agreed to the amendment to add "in a communicable form."

Drafting amendments were made in subsequent clauses, and the report stage was concluded.

On the motion of the EARL OF DROGHEDA the title of the Bill was altered to the Matrimonial Causes Bill, 1937.

On July 19, in the House of Lords, the Matrimonial Causes Bill was read the third time by 79 votes to 28, and passed.

Ministry of Health and Treatment of Rheumatism

Answering, on July 8, an inquiry by Mr. Edward Dunn, who asked what measures the Minister of Health proposed to combat rheumatism, Sir KINGSLEY WOOD said treatment for this varied and complex group of diseases was available in most of the voluntary general hospitals and the general hospitals owned by local authorities, and there were a number of institutions which specialized in the treatment of certain rheumatic diseases. He would continue to give careful con-

sideration to this matter, but at present did not propose to introduce any special schemes which would supersede the progressive and increasing provision now being made to combat and study the disease, provision with which his medical advisers were in close association. He could not state the number of persons chargeable to the Insurance Fund through rheumatism nor the cost and the number of working days lost through the disease. Mr. TURTON asserted that mead was an effective palliative of rheumatism.

Insured Persons Not on Doctors' Lists

On July 8 Sir KINGSLEY WOOD told Mr. Joel that the number of persons who had been insured for twelve months without selecting an insurance doctor was not available, but the number of insured persons at any given time who had not selected a doctor although entitled to do so was about 495,000 in England and Wales. A recent sample investigation of the official records kept by doctors showed that 48 per cent. of the persons who had been on doctors' lists throughout 1936 had not been seen in the year, and that the number of attendances, including home visits, per patient seen during the year was 7.1.

Agriculture Bill: Veterinary Provisions

On July 12 the Agriculture Bill was considered by the House of Commons in committee. On Clause 18 (Veterinary Inspectors) an amendment to leave out the word "inspector" and to insert "officers" was withdrawn after an explanation by Mr. Ramsbotham.

Mr. MACLAREN moved an amendment providing that the Minister should appoint a chief veterinary officer who should be responsible directly to him for the organization of the centralized veterinary service and for supervising the duties to be discharged by the veterinary officers to be appointed. The purpose of the amendment, he said, was to bring into the Ministry of Agriculture a chief veterinary inspector or officer, who should be responsible to the Minister directly and should have the same technical control over the members of the staff as the Chief Medical Officer in the Ministry of Health. After some discussion and an explanation from Mr. Ramsbotham as to the arrangements that had been made, under which the work of administration would be the responsibility of the senior administrative officer while the chief veterinary officer would continue to be responsible for the control of the professional veterinary staff and advise the Minister on all questions connected with diseases of animals, the amendment was withdrawn.

Mr. AMMON moved a new subsection providing for the transfer and attachment to the Ministry of Agriculture and Fisheries veterinary inspectors or veterinary officers wholly or mainly engaged by a local authority. Mr. RAMSBOTHAM said it was the Government's declared intention to invite all whole-time officers to accept appointment under the Ministry, and to become civil servants; it was also the Government's intention to utilize the service of the part-time officers, as far as possible, but it could not concede to those officers the status of civil servants. After further debate, Mr. W. S. MORRISON said that the position of part-time officers would be improved under the Bill. Under the new arrangements they were bound to be more extensively employed. The amendment was negatived.

Mr. W. ROBERTS moved to leave out subsection (3), and asked for some statement as to which of the many functions of the present administrative system were to be transferred and which were to be left to the local authorities and charged to them. Mr. WEDDERBURN said that the services which were going to be transferred were the duties under the Tuberculosis Order, 1925, the routine veterinary inspection under the milk and dairies legislation, the tuberculin tests under the Milk (Special Designation) Order, and the diagnostic inquiries under Schedule D. There was a long list of services which would not be transferred, such as duties relating to the administration of the Diseases of Animals Act, receiving information from owners of diseased stock, etc. The amendment was withdrawn.

Mr. JOHNSTON moved a new clause providing that Part IV of the Bill should, in so far as it applied to Scotland, be administered in consultation with the Secretary of State for Scotland, and through the appropriate departments and officers under his control. Under the Bill the Milk and Dairies Act, the Attested Herds scheme, Milk Orders, etc., would be transferred to the Ministry of Agriculture in England. After a statement from Mr. Wedderburn the clause was negatived.

The committee stage of the Bill was concluded.

Inquiry into Sickness Benefit

On July 12 Mr. HEPWORTH asked the Minister of Health whether any special inquiry was being made by his Department into the alleged existence of an exceptionally large number of applications for sick benefit, especially among women. Mr. BERNAYS said that an investigation was being made by his Department, in conjunction with the Department of Health for Scotland, into the general question of the expenditure of approved societies on disablement benefit, but no conclusions had yet been reached.

Diphtheria Immunization

Mr. W. LEACH asked, on July 15, what methods were adopted by medical officers of health to ascertain whether or not diphtheria patients had been immunized, seeing that in the majority of immunizations no certificates were issued nor did the patients bear any marks to show that they had been immunized. Sir KINGSLEY WOOD replied that it was the practice of medical officers of health to keep records of the names of all persons immunized against diphtheria under arrangements made by the local authorities. He could not accept Mr. Leach's description of this immunization as a "highly dangerous and ill-chosen experiment."

Sir KINGSLEY WOOD further told Mr. Leach that, according to the information furnished by the Cardiff local authority, out of 14,523 children who had been inoculated up to the end of 1936, 195 contracted diphtheria. During the same period 2,918 cases of diphtheria occurred among all children under 15 years of age.

House Collections for Hospitals.—Sir SAMUEL HOARE, on July 1, told Mr. R. C. Morrison that there had come to the notice of the police evidence of door-to-door collections made in the metropolitan area by persons claiming to have authority to collect old clothes, newspapers, etc., on behalf of hospitals. Inquiries made from time to time had not revealed any grounds for action on their part. Mr. MORRISON suggested inquiries to ascertain to what extent, if any, the proceeds from such collections were paid to hospitals. Sir SAMUEL HOARE said that if Mr. Morrison had information suggesting that a breach of the law was being committed in any particular instance he would look into the matter.

Imported Cheese and Disease.—Mr. LIDDALL, on July 1, asked whether the Ministry of Health obtained official certification that the herds of goats from the milk of which imported gorgonzola cheese was made were free from disease; and whether imported cheeses from foreign sources were continuously tested at our ports of entry to prevent the sale here of cheese containing germs of undulant fever or Mediterranean fever or other diseases endemic among South European herds of goats. Sir KINGSLEY said such certification and inspection were not arranged, but the matter had not escaped attention, and on the evidence available no special precautions appeared to be necessary. Any germs which might exist were destroyed during the maturing of the cheese.

Treatment at Infant Welfare Centres.—Sir KINGSLEY WOOD told Mr. Sorenson on July 1 that although separate sessions were held at many infant welfare centres for children between 2 and 5 years of age it was not usually desirable to establish separate centres. Children of all ages up to 5 were seen at infant welfare centres, which numbered 3,368 in England and Wales on December 31 last. The primary purpose of these

centres was preventive and advisory, and children when necessary were referred elsewhere for the appropriate form of treatment.

Health Conditions of Offices.—Sir KINGSLEY WOOD told Mr. Creech Jones on July 1 that he had issued a circular urging local authorities systematically to exercise their powers under the Public Health Act, 1936, in respect of the health conditions of offices. In view of the procedure laid down by the Act it would not be appropriate for the Minister to recommend minimum standards of working conditions, nor any system of systematic inspection of offices.

Hairdressers Registration Bill.—The Hairdressers (Registration) Bill, which was introduced by Lord STRABOLGI in the House of Lords and read the first time on July 2, provides in Clause 21 that nothing in the measure shall prevent the exercise of any right or function by a registered medical practitioner or a registered chemist which he is entitled to exercise under any other Act. The Bill was introduced in the House of Commons last year, and since then there have been several changes in its provisions. The definition of hairdressing has been extended and the saving for doctors and chemists is a new clause. The date for the second reading debate has not been fixed.

Physical Standard of Recruits.—Replying to Sir Arnold Wilson on July 2 Mr. HORE-BELISHA said the physical standard required of recruits for line regiments was still equivalent to, if not higher than, that for a first-class life insurance policy.

Nursing Homes Registration.—Answering Mr. Rostron Duckworth on July 5 Sir KINGSLEY WOOD said by-laws under the Nursing Homes Registration Act, 1927, had been made by eighty-eight local supervising authorities in England and Wales and by forty-two district councils to which the necessary powers had been delegated. The information available was not sufficient to enable him to state the number of authorities which had not made by-laws. The few complaints received in his Department were normally referred to the local authorities responsible for the registration and inspection of nursing homes, and to which such complaints should properly be addressed.

Health of Mercantile Marines.—On July 6 Mr. CREECH JONES asked the President of the Board of Trade what arrangements existed in his Department for the study and prevention of unhealthy conditions of the mercantile marine; whether any medical officers in his Department were charged with this special responsibility; and to what extent consultation with the Ministry of Health on these matters was a practice of the mercantile marine section of his office. Mr. OLIVER STANLEY replied that there were three medical officers attached to the survey staff and close contact was maintained with the Ministry of Health and the port sanitary authorities. Questions relating to the general health of the mercantile marine were dealt with by an interdepartmental committee of the Board of Trade and Ministry of Health representatives. The plans of ships built in this country were examined, and any necessary steps were taken to ensure that the crew's accommodation conformed to the present standards of hygiene and comfort. Provisions for the maintenance of the accommodation were included in the instructions to surveyors on this subject, which had recently been revised and would shortly be issued. In addition, Board of Trade surveyors took every opportunity to inspect the crew's accommodation on ships in service.

Medical Treatment of "Deutschland" Casualties.—On July 6 Mr. MAGNAY asked the Secretary of State for War whether any charge would be raised against the German Government in connexion with the reception and medical treatment of casualties from the German battleship *Deutschland* in the military hospital, Gibraltar. Mr. HORE-BELISHA replied that no charge would be raised against the German Government in respect of a humane service which would always be readily rendered in such circumstances. The cost would be borne on Army funds.

Cost of Dental Benefit.—Sir KINGSLEY WOOD told Mr. D. J. B. Joel on July 8 that the cost of providing dental benefit as a statutory benefit could not be estimated with precision in the absence of reliable data regarding the number of insured persons who would apply for treatment. Such information as was available indicated that about 10 per cent. would apply for treatment each year at an average cost of about £4 per case. On this basis the cost would be approximately £7,000,000 a year. Dental benefit was provided as an additional benefit by 5,000 approved societies and branches in England and Wales with a total membership of 11,800,000, representing 75 per cent. of the insured population. The expenditure on this benefit in 1936 was about £1,750,000.

Shortage of Trained Nurses and Probationers.—Sir ROBERT RANKIN, on July 8, asked whether the attention of the Minister of Health had been called to the increasing shortage of trained nurses and probationers, and whether, in view of the great expansion of the hospital system and public health services of the country in the last ten years, he could state what steps were being taken to ensure an adequate supply of nurses during future years. Sir KINGSLEY WOOD said he had been informed that there was a shortage of nurses relatively to the increased demands for their services. The matter was receiving his close attention, and the associations representing local authorities were in communication with the General Nursing Council regarding certain measures for meeting the situation. Miss WILKINSON asked if the Minister had called the attention of the voluntary hospitals to the necessity for reducing the hours and increasing the wages of their nurses if they wished to get a sufficient number. Sir KINGSLEY WOOD said many hospitals were doing what they could about this important matter.

Midwifery Schemes in Wales.—Sir KINGSLEY WOOD told Mr. Temple Morris on July 8 that proposals under Section 1 of the Midwives Act, 1936, for a service of salaried midwives had been submitted by all the local supervising authorities in Wales, numbering nineteen. The Minister's formal sanction was not required to these proposals, but in three cases he had informed the authorities that in his opinion their proposals were satisfactory. In these and other cases the authorities were proceeding to put the proposals into operation. In some cases he was still in communication with the authorities.

Housing in Glasgow.—Dr. ELLIOT, replying to Mr. Buchanan on July 13, said that the number of houses in the Gorbals Division being dealt with under the Housing Acts as unfit for human habitation or at present on the Corporation's list awaiting such action was 1,773, and that the corresponding number a year ago was 1,799. The latest available information with regard to the number of over-crowded houses in the division was obtained as a result of the overcrowding survey at the end of 1935, when the number was 7,619. It was not possible to show separately the numbers of houses being built for slum clearance and for the relief of overcrowding, as the Corporation was dealing with these problems together, and the purpose for which particular houses were to be used was not determined till the houses were completed. On June 30, 1936, 2,437 houses were under construction, with State assistance, for slum clearance and the relief of overcrowding, while 1,318 had been contracted for but not begun. On June 30, 1937, 2,637 houses were under construction and 2,080 had been contracted for but not begun. On June 30 last year 250 houses were under construction and 98 had been contracted for, without State assistance, while on June 30, 1937, 202 such houses were under construction.

Mortality of Disabled Pensioners.—Mr. H. RAMSBOTHAM told Mr. W. Thorne on July 14 that the number of ex-service disability pensioners who died in the eight years ended March, 1937, was 56,468. The annual mortality rate was about 15.7 per 1,000 pensioners. Comparative figures were not available for the year ended March, 1930, but during the next seven years the average mortality rate of disability pensioners was 16 per 1,000, whereas that of the general male population of corresponding ages in England and Wales during the same period was approximately 10 per 1,000.

Supervision of Nursing Homes.—Miss RATHBONE asked, on July 15, what report had been made by the local authorities to the circular letter of September 30 last, in which attention was called to the importance of the adequate supervision of nursing homes. Sir KINGSLEY WOOD, in reply, said he had not called for a special report from local authorities on this subject. The circular requested the local supervising authorities to satisfy themselves that their arrangements for the inspection of nursing homes sufficed to ensure that the requirements of the Nursing Homes Registration Act were in all cases fully observed. Sir FRANCIS FREMANTLE: As the right hon. gentleman issues a circular every year advising the medical officers on what they should deal with in their annual reports, will he ask them to pay special attention to this matter, which has hitherto been very considerably neglected in many large areas?

Silicosis Claims.—In response to a request by Mr. James Griffiths on July 15, Sir SAMUEL HOARE furnished the following table:

Applications to the Silicosis Medical Board in the six months ended June 30, 1937, for Certificates under the Various Industries (Silicosis) Schemes

	Applications Received	Granted	Refused or Negative	Awaiting Decision
Death	48	32	14	2
Disablement or suspension	327	130	162	35
Separate particulars for anthracite miners for same period.				
Death	23	14	7	2
Disablement	114	56	45	13

Hours of Work in Ministry of Pensions Institutions.—Mr. KIRBY asked the Minister of Pensions the number of hours a week normally worked by the indoor and outdoor staffs respectively of those hospitals and institutions controlled by his department. Mr. RAMSBOTHAM said that the hours worked weekly by hospital staffs varied with different grades. Nurses' duties varied from fifty-seven to sixty-one hours a week for day duty and seventy-eight hours for night duty, both inclusive of meal times. Massage staff and *x*-ray assistants attended for thirty-six and thirty-five hours respectively, exclusive in both cases of meal times. Stewards, clerks, and orderlies were employed from forty-four to forty-eight hours, and domestics from forty-eight to seventy-two. The only staff on outdoor duties were orderlies employed as gardeners, ambulance drivers, etc., who were subject to a forty-eight-hour week.

Medico-Legal

DERMATITIS FROM HAIR TREATMENT

A Manchester lady, at the suggestion of her hairdresser, consented to try a preparation called "oloxo" instead of henna. After preliminary treatment "oloxo" was applied to her head, and the next morning she felt a burning sensation which grew worse. Her hairdresser unsuccessfully treated the dermatitis which developed, and then informed the proprietors, Oloxo, Ltd. A representative of the firm expressed great regret and advised the patient to see a doctor. The disease ran a very painful course; her head suppurated and her face became so swollen that she could not see for three days; her hearing was affected, she could not sleep, and a rash extended all over her body. Under treatment by a dermatologist the condition gradually improved. The patient brought an action against the hairdresser and Oloxo, Ltd., claiming damages for negligence, and the hairdresser sued Oloxo, Ltd., for an indemnity.

At the time of the action, which was tried by Mr. Justice Hilbery at Manchester Assizes at the beginning of July,[1] the patient gave evidence that she was still under treatment, could not do her housework, and was nervous and afraid to go out alone. She could not tolerate heat. She said she had paid the hairdresser half a guinea for the treatment and had only undergone it on the express promise that oloxo was harmless and would not affect her. She had general poisoning, and could not recover for at least six months. She had no predisposition to skin disease. The hairdresser testified that she had attended a series of classes given by Oloxo, Ltd., and their representative had assured the pupils that Oloxo was perfectly safe and had offered to indemnify them against claims for damages. She had never been told to make a test. She had used on the patient the method she had been taught.

At the end of the case for the patient and the hairdresser all parties agreed to continue the trial before the judge alone, and the jury was released. Counsel for Oloxo, Ltd., stated that the firm merely marketed oloxo, which was made in the United States. They dealt only with wholesalers and not with hairdressers, though they sometimes held local lectures to stimulate trade. The managing director admitted in evidence that there was always a possibility of danger to abnormal skins. The firm's booklet now advised that each customer should be tested, but at the time of the present accident it had contained no such instructions. The packets now bore a notice saying that the preparation might cause serious inflammation on the skin of certain persons and should be used only in accordance with expert advice. The notice had not been on the package at the time of the accident, but had been put on after consultation with the Home Office about the Poisons Rules. He admitted that he had distributed a preparation which he regarded as dangerous without a test, but had not said that a test should be made in every case. He believed that the hairdresser had been warned to make a test. The lecturer stated that he had always told students to make a test and had never represented oloxo as perfectly safe and harmless.

The learned judge found as a fact that the traveller of Oloxo, Ltd., had told the hairdresser the preparation was safe and that without this assurance she would not have ordered any. He had no doubt that she and the patient had intended that the assurance should be a warranty and an essential term of the contract for the application of oloxo. He came to the conclusion that oloxo was not safe for the purpose for which it was sold and that the company had known it was not safe. The damage to the patient was in the direct line of consequence from the breach of duty committed by Oloxo, Ltd. Nobody could tell without a test whether a customer would suffer or not. As they sold it for application to all heads and gave no warning that it was dangerous without a test, they must be held to be selling an article dangerous in itself. He was satisfied that the representative of Oloxo, Ltd., had assured hairdressers at lectures that the firm would indemnify them against any claim. The firm had gone back on this indemnity and it had not been made at a time when it could be part of the contract with the hairdresser; nevertheless, nearly all the hairdresser's costs had been caused by their repudiating it. He gave judgement for £520 damages for the patient against the hairdresser, and for the hairdresser against the firm.

[1] *Manchester Guardian*, June 30, July 1 and 2.

The Archbishop of Canterbury, speaking at the Mansion House at a festival dinner of the Princess Elizabeth of York Hospital for Children, said that following a gift of £10,000 by Mr. E. W. Meyerstein and an offer by Mr. S. Garton of his family home at Banstead, the new hospital was being built among the Surrey woods. The cost would be about £200,000, of which £70,000 was already available, but £130,000 had still to be raised in the next twelve months unless the work was to stop. Brigadier-General Sir Hill Child, chairman of the hospital, announced donations at the dinner totalling £5,701. The out-patients' department, emergency beds, and the old hospital buildings at Shadwell will be maintained and used as a clearing station. Patients will be transferred by ambulance to the new hospital.

Medical News

By an Order of the Committee of Privy Council, made after consultation with the Medical Research Council and with the President of the Royal Society, L. J. Witts, M.D., F.R.C.P., Professor of Medicine in the University of London and Physician to St. Bartholomew's Hospital, and G. E. Gask, C.M.G., D.S.O., F.R.C.S., Emeritus Professor of Surgery in the University of London, are appointed members of the Medical Research Council, in succession to Sir Thomas Lewis, C.B.E., M.D., F.R.C.P., F.R.S., and Sir David P. D. Wilkie, O.B.E., F.R.C.S., who retire in rotation on September 30.

The third congress of the International Society of Geographical Pathology will be held at Stockholm from August 5 to 7, when various aspects of anaemia will be discussed. Further information can be obtained from Professor F. Henschen, Caroline Institute, Stockholm.

The third International Congress for Medical Postgraduate Instruction will be held in Berlin from August 21 to 24. The meetings will be held in the Langenbeck-Virchow House, Luisenstrasse 58–59. Further information can be obtained from the general secretary, Professor Adam, Kaiserin Friedrich Haus, Robert Koch Platz 7, Berlin, N.W.7.

The King has approved the grant to the Institute of Hygiene of a supplemental Royal Charter giving it power to amalgamate with the Royal Institute of Public Health. The amalgamated bodies will be known as the Royal Institute of Public Health and Hygiene.

The Minister of Health, speaking at the Health Congress of the Royal Sanitary Institute at Birmingham last week, announced that the Prime Minister would inaugurate a National Health Campaign in October in London for the purpose of making the health services better known and getting them better used. The Prime Minister would be supported by leading men in all the parties. The slogan of the campaign would be "Use Your Health Services." There would also subsequently be meetings in large and small towns addressed by prominent men and women, and it was hoped to enlist the press, the wireless, and the films.

Dr. F. Murgatroyd, of the Liverpool School of Tropical Medicine, who is at present engaged on research work on sleeping sickness in West Africa, has recently been appointed assistant physician to the London Hospital for Tropical Diseases.

Dr. G. Jessel has been elected president of the North Western Tuberculosis Society after 18 years' service as hon. secretary. Dr. A. Fleming (11, Woodvale Road, Knutsford, Cheshire) has been appointed hon. secretary in succession to Dr. Jessel.

At the July meeting of the Central Midwives Board for England and Wales appointment as examiner was granted to Dr. Charles Henry Walsh; and Wellhouse Hospital, Barnet, and Park Hospital, Davyhulme, Manchester, were approved as institutions for providing instruction in the essentials of obstetric analgesia and in the use of a recognized apparatus.

The May issue of the *Bulletin de l'Office International d'Hygiène Publique* contains articles on malaria in Southern Serbia, sanitary and medical investigations in the Liberian Republic in 1935 and 1936, determination of blood groups, the campaign against contagious abortion in cattle in Norway, destruction of grasshoppers, and arsenical poisoning in workers.

By Wednesday afternoon 1,150 members had registered their attendance at the Annual Meeting of the British Medical Association in Belfast this week.

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to THE EDITOR, BRITISH MEDICAL JOURNAL, B.M.A. HOUSE, TAVISTOCK SQUARE, W.C.1.

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QUERIES AND ANSWERS

Health Services in Holland

Dr. CHRISTOPHER ROLLESTON (Ketton, Stamford) writes: I have been looking at the statistics of the League of Nations and find that Holland is apparently the healthiest country in the world. The infant mortality rate is 34 per 1,000; pulmonary tuberculosis mortality 0.4, and so on. Is this well known to the profession in this country? If so, how is it explained? I have known for some time that their child-bearing figures are good, and I understand that their medical curriculum is longer than ours. What I am anxious to know is whether the health services in Holland have been developed extensively.

Agranulocytosis and Rheumatism

Mr. L. A. RIDDELL, F.R.C.S. (Redruth) writes: I should like to ask a question relevant to the paper by Dr. C. J. Young on "Agranulocytosis and Para-amino-benzene Sulphonamide" (*Journal*, July 17, p. 105). Has any connexion been noticed between rheumatic conditions and agranulocytosis or relative polymorphonuclear leucopenia, irrespective of the treatment given?

Income Tax

Liability to U.K. Tax

"D. B." lives most of his time in Ireland, but since July, 1936, following a postgraduate course, he has done locumtenent work in the United Kingdom. He intends to live either in Ireland or England according to the location of a suitable appointment. Is he liable to pay the United Kingdom tax or to be taxed by the Irish Free State?

*** He is liable to account for tax on his earnings here to the authorities in the Irish Free State until such time as he becomes resident—as distinct from occasionally resident in the United Kingdom—when he will become liable to tax in this country.

Commencing Employment

"ASSISTANT" had a hospital appointment from May, 1936, at £175 per annum "all found." He held it until August 13, 1936, earning (cash) £42, and then began as an indoor general assistant at £350 per annum, car and expenses provided. That terminated at May 8, 1937, and after a week's interval he took another appointment at £350 (indoor) plus an allowance of £50 for car expenses. What is his liability?

*** For the financial year ended April 5, 1937, he earned £42 + £225 = £267, and that is the gross amount of income for which he is assessable for 1936–7. As regards 1937–8 he will be assessable on the amount of his earnings for that year, and the declaration of income can be deferred until after April 5, 1938. In calculating his earnings from his

present employment he can either ignore the £50 car allowance or include it, and then deduct the running costs and depreciation of the car, but not instalments of purchase price, as they are capital outlay. As the assessments for each year will presumably be made after the financial year is over, the whole tax for that year will become due a few weeks after the assessment is made.

Gratuity on Leaving R.A.F.

"A. C. C." will be entitled to a gratuity of £1,000. Will this be subject to income tax if used to purchase a practice?

*** Payments made by way of gratuity to civil servants on retirement are not taxable, and we see no reason why similar treatment should not apply to an R.A.F. gratuity payable after only five years' service. "A. C. C." however, might put the point to the assessing officer of the R.A.F. so that he would have an authoritative statement for future reference. The use to which the gratuity is put should not affect the question of taxability.

General Expenses—Rent, Rates, etc.

"A. C." refers to a table of expenses given in Professor A. L. Bowley's memorandum with regard to the Court of Inquiry's investigation into the capitation fee, and points out that two-thirds is included in the table for rent, rates, fuel, and light, whereas he has claimed only one-third for income tax purposes.

*** "A. C." has apparently misunderstood the nature of the expenses in the table—they refer to private, not professional, expenses. Consequently the two-thirds shown in the cost-of-living statement is consistent with the one-third which he has treated as a professional expense.

Payment for Guaranteeing a Loan

"R. D." refers to a previous reply on the above question—presumably one in our issue of December 8, 1934—and encloses a letter from his inspector of taxes which admits that the point is not covered by case law, but argues against allowing the deduction.

*** The statement of facts in the case of Ryall *v.* Hoare supports the view that when that case was taken to the High Court the Revenue had allowed the borrower to deduct the guarantee payment as an expense. But that fact was not relevant to the decision and the case has accordingly no validity as authority for the allowance. The chief difficulty is that the payments arise out of the financial position of the practitioner and not out of the circumstances of the practice, and this lends some support to the view that they are "capital" expenses and not incurred in carrying on the practice. In the absence of judicial direction the point is in doubt, and on its merits we are not prepared to advise "R. D." to take it to formal appeal.

Production of Balance Sheet

"E. S." has a sale practice and the inspector of taxes is "demanding" production of a balance sheet for the practice. Is this in order?

*** In our experience such requests are rare in the case of professional practices (where the amount of assets used in the work is usually relatively small) and is certainly not made where the assessments have been on the cash receipt basis. We suggest that our correspondent might point this out to the inspector and inquire for what special reason a balance sheet is required in his particular case.

Allowance for Bank Interest

"X. Y. Z." was unable to claim the special allowance for bank interest paid by him in the years ending April, 1931, 1932, and 1934 as his "profits were not large enough to be assessable." Can any allowance now be claimed for 1936–7 and 1937–8?

*** Only in respect of interest paid in those years. It has to be remembered that each financial year stands by itself, and relief for interest paid in any one year is due only against tax payable for the same year. (Where the interest can be treated as an "expense" it affects the following year, but in the long run the result is normally the same.)

LETTERS, NOTES, ETC.

Rheumatism and Influenza

Dr. F. E. GRAHAM-BONNALIE, the director of the Brighton Rheumatism Clinic, writes: With reference to the correspondence which has been appearing in your columns (*Journal*, June 26, p. 1352) regarding the incidence of influenza, during the last winter, among patients being treated with the Warren Crowe rheumatic vaccine, the following figures may be of interest to your readers. Of 138 people who have been interrogated this week and who had been receiving the vaccine treatment, twenty-four had influenza and 114 remained free. In the case of the 114 who remained free, there were twenty cases of influenza in their homes. Whether these figures afford any evidence of immunity conferred upon these patients would appear to depend upon the influenza incidence among the general population.

Droitwich Spa

Medical men who wish to advise special treatment for their patients do not always have ready at hand details about the facilities, social and medicinal, of the various spas in this country. We have recently received a well-illustrated pamphlet entitled *Droitwich Spa and the Treatment of Rheumatism*, in which full information is given of the therapeutic equipment available at Droitwich, an analysis of the water, and other information of use to the prospective patient and to his practitioner. It can be obtained by medical men free of charge on application to the Spa Director, Droitwich, Worcestershire.

Medical Golf

The Scottish Medical Golfing Society held its summer week-end meeting at Princes' Golf Club, Sandwich, on July 10 and 11. The results of the competitions were as follows. Singles *v.* Bogey: 1, Dr. Bruce Williamson (12) 3 down; Sir Lancelot Barrington-Ward, Drs. Bertram Shires, Keith Forbes, Desmond Curran, and Walter Maclay tied for second place with 4 down. Four Ball *v.* Bogey: 1, Drs. Bartleman and Curran, 5 up; 2, Drs. Maclay and Gordon, and Drs. Bruce Williamson and Keith Forbes tied at 3 up. The Medal Round was won by Dr. Curran (7), 73; Dr. Donald Paterson (18) was second with 75, and Mr. Rupert Scott (9) third with 76. The Silver Haggis for the best eclectic score was won by Dr. W. A. Low with 68 (86 less 18). In addition to the above there were various hidden prizes.

Digest of Treatment

In the *Journal* of July 10 (p. 73) we announced the appearance of a monthly review of therapeutics entitled *Digest of Treatment*. This is published by J. B. Lippincott Company, Washington Square, Philadelphia, but in this country the annual subscription of 25s. and any inquiries may be addressed to J. B. Lippincott Company, 16, John Street, Adelphi, London, W.C.2.

Corrigendum: One-eyed Pilots

Mr. J. MYLES BICKERTON'S letter on page 138 of our issue for July 17 contains an error which renders the table useless. The second column, group 3, should have read "6/6 or 100 per cent., *with* glasses." The table is here reprinted in its correct form:

Standards for One-eyed A Licence Pilots

Group	Good Eye	Other Eye
(1)	6/6 vision or 100 per cent., without glasses Normal field of vision Not colour blind	Blind Standard (Group 1 or Group 2 or Group 3)
(2)	6/9 or 90 per cent., without glasses Normal field Not colour blind	6/60 to 6/24 (with or without glasses) Field good
(3)	6/6 or 100 per cent., with glasses Normal field Normal colour vision	6/24 with correction Field good Binocular vision